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Marketing Research Report No. 270

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Consumers Appraise Canned and Frozen Foods, Their Packages and Labels

in ATLANTA, KANSAS CITY, and SAN FRANCISCO

Agricultural Marketing Service
Marketing Research Division
Washington, D. C.

UNITED STATES DEPARTMENT OF AGRICULTURE

ACKNOWLEDGMENTS

This report deals with consumers' use of canned and frozen foods and what they think of the packaging and labeling of each. It is one of a series of studies concerning consumer preferences for farm products conducted by the Market Development Branch, Marketing Research Division. The study was under the general direction of Trienah Meyers.

Technical advice during the development of the study was provided by commodity specialists in the Department, by the American Can Company, and the National Canners Association.

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September 1958

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price 45 cents

CONSUMERS APPRAISE CANNED AND FROZEN FOODS, THEIR PACKAGES AND LABELS, in ATLANTA, KANSAS CITY, SAN FRANCISCO

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SUMMARY

The Department conducted a 3-city consumer survey designed to elicit homemakers' attitudes toward various aspects of the packages and containers used for canned and frozen foods--namely, reactions to the different containers used, to the label information, and to quality, storage, and size considerations. The sample survey was conducted in Atlanta, Kansas City, and San Francisco in June 1956.

On the whole, consumers approved the standard containers used for both canned and frozen foods. They felt that canned foods can be stored indefinitely and are convenient and easy to store. Frozen food containers, on the other hand, were reported as easy to open and to dispose of. Relatively few homemakers expressed complaints about either kind of container.

Homemakers in the 3 cities were not particularly well informed on the various items of label information which concern volume. These items include can size, statement of contents, or number of servings as used by industry to identify the different containers. This seems to be simply a lack of interest rather than any particular dissatisfaction on the homemakers' part. Actually, almost 9 in 10 of the homemakers interviewed felt that the various existing sizes of canned food provide adequate choice in terms of number of servings needed for their families. The comparable proportion satisfied with existing frozen food sizes was around 6 in 10.

The key label item for both canned and frozen foods as far as homemakers were concerned is brand name; package size and weight were far down the scale. Frozen food users are somewhat more likely to refer to the label for recipes and ways of preparing food than are canned food users. Instructions on how to defrost and handle the food are even more useful to frozen food users. Despite the importance of brand name as the key label item, a substantial majority rejected the idea of a label containing only brand name and statement of contents.

Most homemakers remove leftovers from the opened can before storing in the belief that it is not safe to leave food in the opened container. They

were more uncertain concerning refreezing thawed uncooked food. From 4 to 6 in 10 of the homemakers interviewed felt refreezing was unsafe, quoting as their authority the label itself; some 3 or 4 in 10 just didn't know.

The picture which develops from the findings of this sample survey, then, is one of general satisfaction with existing containers, despite some expressed faults--such as the difficulty of opening cans or the lack of variety in frozen food container sizes. The lack of knowledge of specific sizes is no problem because, through experience, the homemaker recognizes the size which best fits her need. In general, the homemaker is satisfied with the array of available sizes of canned foods; the lack of such a range for frozen foods is a problem to some homemakers, although overall, the number of servings provided is considered adequate for the family. Existing labels also satisfy most consumers. They expect to find (if not to use) the information usually shown, whether by necessity or practice, and would not easily accept a label which presented much less in the way of information.

In order to provide a base for the detailed inquiry on containers, data were collected on use of and attitudes towards the contents of canned and frozen packages. Results of this questioning indicate that almost 100 percent of the homemakers in the 3 cities used one or more of the canned food classes asked about, with canned vegetables and fruits leading the list, followed by soups, juices, and meats.

Overall, use of frozen foods was not so widespread as canned food usage. Vegetables again were first, after which came frozen juices, meats, and fruits, and, finally, soups.

In a direct expression of preference between the canned and frozen forms, homemakers in Atlanta and Kansas City were almost equally divided in the matter of vegetables. In San Francisco homemakers selected the frozen form of vegetables by 3 to 1. For fruits, however, homemakers in the 3 cities overwhelmingly selected canned fruits 2 or 3 to 1. Factors of taste--tastes like fresh, tastes natural, and so on--were predominant among those preferring the frozen form; those choosing the canned variety spread their replies among taste, economy, and convenience of preparation and use.

As for superior quality, frozen foods appeared to be the choice of some 4 in 10 of the homemakers. An additional 1 or 2 in 10 felt the canned product provided better quality; 3 in 10 were unable to distinguish a difference. Freshness "preserved by the freezing process" was an important factor contributing to the feeling that frozen foods provide better quality. Homemakers' selection of canned foods as having better quality was based on more nebulous responses, including a general feeling that they taste better.

INTRODUCTION

Most food products are ultimately presented to the consumer in some form of package. The sterile processed food container (can and jar) and the cartons or boxes used for frozen foods are among the most important of these packages. The foods offered the consumer in canned and frozen forms come in many different sizes. Similarly, many different types of labels identify and aid in merchandising these products. Today's food packages with their attractive, eye-appealing labels and sizes represent a promotional or merchandising effort concentrated in a very few square inches.

At the time this study was proposed, relatively little information was available as to consumers' satisfaction with, reactions to, and knowledge of the containers and labeling practices in use. This research is an attempt to provide an introductory evaluation of these areas from the consumers' viewpoint. In order to provide a framework for specific "container" information, research was also conducted on consumers' use of canned and frozen foods and their attitudes and reactions toward the different forms of foods. Such data are of value to canners and packers as well as to wholesale and retail distributor groups in providing information on consumer thinking and indicating problem areas on which research can be focused. The results are also expected to be useful as a basis for promotional and merchandising purposes.

The study on which this report is based is part of a nationwide program of research designed to improve efficiency in marketing farm products.

Scope of Study

The general objectives of the study were:

(1) To determine the proportion of homemakers in the areas surveyed who used various canned or frozen foods during the month preceding the survey and how often they used them.

(2) To develop information on the attitudes and opinions of homemakers toward the different forms of foods, such as which form was preferred and reasons for preference.

(3) To develop information on the attitudes and opinions of homemakers toward the different containers and labeling practices, such as preferred container, knowledge of label items, and desirable and undesirable characteristics of containers.

(4) To determine opinions and attitudes toward the adequacy of canned and frozen foods with respect to servings obtained and the practices of homemakers in serving these foods.

(5) To develop information on the practices followed in handling and storing canned and frozen foods.

The scope of the study was restricted to vegetables, fruits, juices, soups, and meats which are packaged in both the canned and frozen form. A further restriction was made in defining an eligible respondent as one who had used one or more of these food categories within the month preceding the interview. Thus, statements on the incidence of canned and frozen use are limited to the specified time period.

The Sample

Atlanta, Ga., Kansas City, Mo., and San Francisco, Calif., were selected for study on the basis of general availability of the products and containers and because they represent different marketing areas in terms of regional location and consumption habits.

In each of the cities, a sample, selected from a city directory, was drawn to represent all private households within the city limits and, in certain cases, within selected suburban areas. Interviewing took place simultaneously in each of the cities during June 1956. The person interviewed in each household was the one who had primary responsibility for buying and preparing the food. The number of interviews taken was 427 in Atlanta, 412 in Kansas City, and 353 in San Francisco.

For ease of presentation and to eliminate repetition, the analysis, for the most part, is presented in terms of general findings which were fairly similar in each of the cities. In those cases where important differences exist between cities, they are brought to the readers' attention. It should not be construed from this approach that the data can be combined, nor should the results be projected beyond the limits of the 3 cities. Each city should be considered separately, as each sample is representative of its universe only.

Since the estimates shown for each city are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken. Therefore, in comparing results obtained from the 3 cities, only differences which are statistically significant are discussed. As in any survey work, the results are also subject to errors of response and nonreporting.

The following illustrations indicate the order of magnitude of the sampling errors for some typical statistics for each of the cities:

1. About 96 percent of the homemakers in Atlanta had used canned foods within the past month. The chances are about 2 in 3 that the sample estimate of canned food users in Atlanta lies within 1 percent of the true proportion.

2. Approximately 25 percent of the canned food users in San Francisco who have some college training leave unused portions of canned food in the opened can. For a figure of this small size, the estimated range, using 2 chances in 3, within which the sample estimate might approximate the true proportion is plus or minus 6 percent.

3. Frozen soups are used by 9 percent of the families in Kansas City. We estimate, with chances about 2 in 3, that, if this study were replicated, this percentage would fall between 7 percent and 11 percent.

SURVEY RESULTS

Patterns of Use

Almost all homemakers in the three cities--Atlanta, Kansas City, and San Francisco--had used one or more canned food products in the month preceding the interview in June 1956. The use of frozen foods, on the other hand, although substantial, was not as widespread, ranging from around 70 percent in Atlanta and Kansas City to approximately 80 percent in San Francisco (table 1).

Table 1.--Use of canned and frozen food products in the month preceding the interview, by city

Products used	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Canned food products ---	96	96	93
Frozen food products ---	69	72	80
Total -------	100	100	100
Canned only ----------	28	26	15
Frozen only ----------	1	2	2
Both canned and frozen	68	70	78
Neither --------------	3	2	5
Number of cases ---	427	412	353

Whether or not canned foods were used appeared to be the same irrespective of family size, educational background, or income level. Such variations as did exist were relatively minor.

In the case of frozen food, however, the incidence of use differed considerably among the different groups. Homemakers 65 years old and over, for example, were somewhat less likely to use frozen foods. The use of frozen foods increased appreciably among the higher income groups in all 3 cities, although the differences were much more marked in Atlanta than in San Francisco. The range in Atlanta was from 50 percent among the lowest income group to 91 percent among those with the highest incomes; in San Francisco, use of frozen foods varied between 69 percent at the low end to 87 percent at the upper extreme. The same pattern existed by educational level in all 3 cities--those with only a grammar school education were much less likely to use frozen foods (table 8).

Use of specific canned foods.--Vegetables and fruits were the canned foods used by the largest proportion of homemakers, followed by soups, juices and meats. In Atlanta and Kansas City, canned vegetables and canned fruits were each used by almost 9 in 10 of the homemakers within the past month. In San Francisco, the proportion using these products was somewhat less (about 8 in 10). Soups and juices were each used by about 7 in 10 homemakers; the proportion using canned meats, on the other hand, ranged from 4 in 10 in San Francisco and Kansas City, to about 7 in 10 in Atlanta (table 9).

When the data on specific canned food use are examined in light of the various background characteristics, certain relationships emerge. In Atlanta, the use of canned meats decreases as income rises; in Kansas City somewhat the reverse is true--use of canned meats is higher among the middle and high income groups than among those with the lowest income. Finally, in San Francisco, the use of canned meats remains much the same irrespective of income level. In Atlanta and Kansas City older homemakers tend to use less canned meats than younger housewives. In the case of family size, canned meats are used to a greater extent by medium and large size families (3 or more members). On the other hand, the use of canned vegetables, fruits, soups, or juices shows relatively little variation, either among the 3 cities or for the different characteristics (table 10).

Use of specific frozen foods.--Vegetables were the most widely used frozen food in the 3 cities. Around 6 homemakers in 10 in Atlanta and Kansas City, and 7 in 10 in San Francisco used frozen vegetables. About 5 in 10 of the housewives used frozen juices; between 2 and 4 in 10 used meats and fruits; soups were used by 1 homemaker in 10.

Frozen vegetables were used more extensively by homemakers in San Francisco than in the other cities; fruits were most popular in Atlanta and Kansas City; frozen meats were most widely used in Atlanta; juices and soups were used by the same proportion of homemakers in each city (table 9).

In Atlanta, use of each of the specified frozen foods--with the exception of frozen soups--tends to be somewhat higher among upper income families and those with greater formal education. Homemakers in Kansas City and San Francisco fail to show any definite trend or pattern for any of the usual socio-economic characteristics; such changes as do emerge appear to be a function of the food class rather than the age of the homemaker, family income and so on. For example, use of frozen juice in Kansas City is markedly higher among homemakers with a college education (91 percent as compared with 50 percent of those with only a grammar school education) whereas little difference is indicated for vegetables, fruits, and meats (table 11).

Use of fresh foods.--As a measure of comparison, homemakers who had used either canned or frozen foods or both were asked about their use of fresh vegetables and fruits. Of the group, practically every homemaker in each city had used one or more fresh vegetables within the month preceding the interview. The use of fresh fruits was also substantial, ranging from 92 percent of those interviewed in Kansas City to 96 percent in San Francisco. The extent of use of fresh vegetables and fruits was sufficiently widespread in the 3 cities to show relatively little variation by the usual socio-economic characteristics (table 12).

Frequency of use.--Moving from the percent of use to frequency of use, we find canned vegetables were used more often, on the average, in Atlanta and Kansas City than were the other canned food items. In Kansas City, homemakers used canned vegetables some 18 times a month or approximately 4 times a week. In Atlanta, canned vegetables were used on the average about 11 times a month; in San Francisco, approximately 9 times a month. Canned fruits were used between 10 and 12 times a month, as were canned juices. Use of canned soup ranged between 8 and 10 times a month. At the extreme, canned meats were used an average of 3 times a month in Kansas City and San Francisco, and 8 times a month in Atlanta (tables 2 and 13).

Homemakers used frozen juices more than any other frozen food. In Kansas City, homemakers had used frozen juices on the average of 19 times a month or more than 4 times a week. The average was only slightly lower in Atlanta and San Francisco (17 times a month). Following juices came frozen vegetables (used around 10 times a month, on the average), frozen fruits and meats (between 3 and 6 times a month) and finally, frozen soups (around 3 times a month by the very small number who used them) (table 14).

Comparing the frequency of use of canned and frozen items, the highest average use was reported for frozen juices; the lowest for frozen soups. In Atlanta, with the exception of juice, foods in the canned form were used, on the average, more frequently than foods in the frozen form. The same was true for Kansas City with the additional exception of meats--frozen meats were used slightly more often than canned meats. In San Francisco, frozen vegetables and meats, as well as juices, were used as often or more than the canned form.

As a further base of comparison, homemakers were asked how often they used either or both fresh vegetables and fresh fruits. In each city, homemakers reported using them an average of at least once a day or 30 or more times a month (table 15).

Table 2.--Average number of times a month food items were used, by form and city

Form and food item	Atlanta	Kansas City	San Francisco
Canned:			
Vegetables ------	11.3	17.8	8.7
Fruits ----------	10.0	12.1	10.4
Juices ----------	11.3	12.6	10.0
Soups -----------	7.8	10.0	8.7
Meats -----------	7.8	3.7	3.1
Frozen:			
Vegetables ------	9.5	10.0	11.7
Fruits ----------	5.6	5.6	3.2
Juices ----------	16.5	18.6	16.5
Meats -----------	6.1	4.3	3.6
Fresh:			
Vegetables ------	30 +	30 +	30 +
Fruits ----------	30 +	30 +	30 +

A word of caution is in order concerning any expansion to yearly totals of the comparisons of both how widely and how often the different foods and/or forms are used. Any such analysis must be conditioned by the fact that certain foods, such as soups, for example, may have definite seasonal variations. Secondly, availability of fresh produce affects the use patterns of canned and frozen foods.

It should be borne in mind that interviewing for this study took place during the early summer of 1956 and that "eligibility" (that is, those to be interviewed) was restricted to homemakers who had used one or more of either of the forms, canned or frozen, within the month preceding the interview date.

Nonuse of canned or frozen foods.--About 4 percent of the respondents in each city had not used any canned foods within the past month; the proportion not using frozen foods ranged from about 20 percent of the homemakers in San Francisco to around 30 percent in both Atlanta and Kansas City.

As far as nonuse of either canned or frozen foods is concerned, a majority of the small number of nonusers had actually used these foods within the past year. Reasons for nonuse of frozen foods within the past month were much the same irrespective of when they had last been used, if at all. Specifically, nonusers considered frozen foods too expensive; they had no place to store them; or they preferred fresh or canned foods (table 16).

Turning to nonuse of specific products, homemakers did not use canned meats in the month preceding the survey because they preferred some other form, a member of the family did not like canned meat, they thought canned meats cost too much, they did not like the taste, and simply, habit (table 17). Nonusers of canned juice felt it did not taste fresh or natural, "had a canned or tinny taste" or they preferred other forms (table 18). In the case of canned soups, many homemakers served them only in the winter time. Others preferred to prepare their own and some just did not use soups as part of their diet (table 19). Nonuse of the remaining canned foods--vegetables and fruits--was too small to permit an analysis of the reasons for nonuse.

On the frozen food side, frozen soups were not used widely because homemakers did not know the item was available (particularly in Atlanta and Kansas City), habit, because they prefer to prepare their own, and because they thought frozen soups are too expensive (table 20). Homemakers preferred fresh to frozen meats; they also found frozen meats too expensive, and they preferred to prepare their own meats (table 21). Nonuse of frozen juices was attributed to habit and a general lack of interest in trying the product, a dislike of frozen juice by some member of the family, and its cost (table 22). Cost was also a primary reason for nonuse of both frozen fruits and vegetables, followed by a general preference for the fresh or canned variety (tables 23 and 24).

Preference and Quality Evaluation

When homemakers in the three cities were asked which form of food--fresh, canned, or frozen--they preferred, a substantial majority chose the fresh form for both fruits and vegetables. In the case of fruits, the canned form was second choice, frozen last. For vegetables, the frozen form was a slight second choice over the canned variety (table 25).

In order to obtain a more direct expression of preference, respondents were asked to choose directly between the two processed forms--canned and frozen. In both Atlanta and Kansas City, homemakers divided almost equally in the matter of vegetables--just over 40 percent preferred the canned version, an equal proportion preferred the frozen one. In San Francisco, on the other hand, preference for frozen was quite distinct--about 66 percent selected this form--only 20 percent chose canned vegetables. In fruits, however, the selection was overwhelmingly in one direction in all 3 cities--almost 6 out of 10 homemakers in each city preferred canned fruits to frozen fruits; between 2 and 3 out of 10 homemakers preferred the frozen form (table 26).

Convenience in use and favorable taste and flavor (each mentioned by 3 in 10) were among the important appeals of canned vegetables. Convenience was expressed by respondents in such terms as ready to use, less trouble to prepare, and cooks quickly. "Good, better, tasty" were the terms used to amplify taste and flavor. Economy was another important attribute--homemakers considered canned vegetables less expensive, or more economical to use. Ease of storage was also considered by those preferring canned to frozen (table 27). On the other hand, taste and flavor were the factors leading to the selection of the frozen type. More than half of the homemakers preferring frozen to canned vegetables said they were fresher, they tasted natural or like the fresh, and they had a good taste or a better taste. They also considered frozen vegetables "ready to use," and "easy and no trouble to prepare" (table 28). Thus, comparing the two, taste was an overwhelming factor among those preferring frozen vegetables; no single factor was so predominant among those preferring canned vegetables.

The situation was much the same for those preferring either canned or frozen fruits. Factors of taste were predominant in the selection of frozen fruits; among those preferring the canned fruits, taste, economy, and convenience of preparation shared almost equally (tables 29 and 30).

On the question of the quality of canned versus frozen foods, about 4 homemakers in 10 felt that better quality was obtainable in frozen foods. Between 1 and 2 in 10 felt canned foods provided the best quality; an additional 3 in 10 reported that the quality was the same for both canned and frozen foods (table 31).

Freshness, mentioned by between 3 and 5 in 10, was an important attribute of frozen foods which contributed to the judgment that they provided better quality. Homemakers felt that the freezing process preserves the fresh or natural flavor, that frozen foods are more like fresh and are "put up" fresh. Healthwise, homemakers felt that the freezing process preserves vitamins and thus the frozen foods provide more food value, and finally, that frozen foods generally contain "choice, top grade, or select" food products (table 32).

The preferences expressed for canned foods, on the other hand, were not as pronounced as those given for selecting frozen foods. Only about 1 in 10 felt the canned foods taste better. Some respondents reported they had not as yet tried frozen foods and considered the quality of canned foods quite high. In addition, some felt that the canning process preserves fresh flavor (table 33).

Those who considered the canned and frozen forms equal in quality were outspoken in support of their view--almost 6 in 10 felt that the retailer "couldn't sell bad quality in either canned or frozen." Some 3 in 10 stated that brand was an important determinant, not the form--"if you buy a good, dependable brand, you know its good quality" (table 34).

The Package Itself

As noted earlier, the average homemaker purchases a substantial portion of the food consumed in the home in either a canned or frozen form. One of the major purposes of the study was to learn her reactions to the containers in which these foods are available.

Convenience.--Turning from the contents of the container to the package itself, homemakers in Kansas City and San Francisco considered the frozen food container, in general, easier and more convenient to use than the can; in Atlanta, the choice was evenly divided (table 35). Two factors contributed heavily to the feeling that frozen food containers were more desirable; namely, they are easier to open (mentioned by between 6 and 8 in 10), and they are easy to dispose of and don't take up much room in the trash (between 2 and 5 in 10) (table 36). About 4 in 10 of those selecting the cans as easier to use also considered them easy to open, followed by the fact that the cans are easier to store, homemakers have more room available in which to store canned products, and canned products can be stored indefinitely and are not perishable (table 37).

Size.--One of the more important packaging factors is size. In the case of cans, a systematic progression of sizes has been developed with the intention of satisfying a majority of homemakers; on the frozen food side, the issuance of standards for different products is a step in this direction. Researchers were interested in discovering whether the homemaker is satisfied with the sizes available to her.

According to the survey, almost 9 homemakers in 10 in each of the 3 cities felt that existing canned food sizes provide adequately for their needs in terms of number of servings. Sentiment was not quite so overwhelming when the discussion turned to frozen foods--around 6 in 10 felt that existing frozen food containers provided the needed servings per family (table 3).

Table 3.--Extent of satisfaction with existing container sizes for frozen and canned foods

Extent of satisfaction	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Canned:			
Satisfied ---------	89	89	86
Dissatisfied ------	11	11	14
Frozen:			
Satisfied ---------	72	63	65
Dissatisfied ------	28	37	35

The reasons for disliking present sizes of frozen food containers were that "existing packages are too small; not enough food per package for my family" (mentioned by around 5 in 10); the reverse, "they are too large" (1 in 3); and a thought involving both of the foregoing, "there just isn't enough variety in sizes" (1 in 5) (table 38).

Information dealing with the homemakers' knowledge of specific can size was also collected. A number of the more common container sizes were read to each homemaker and she was asked whether she had heard of each of them. As a further check, homemakers indicating they were familiar with the can size were asked to specify the number of ounces and servings to be obtained from the container. Container sizes chosen were as follows:

No. 2 - No. 2½ - No. 303 - No. 8Z - No. 1

In addition, a No. 5 container, which is generally not found in use for household purposes, was included to test homemakers' reactions. Responses were considered correct or false on the basis of servings and ounces to be found in the Net Contents Statement for Canned Food Labels, published by the National Canners Association. In the case of the No. 1 can, responses applicable to either the tall or flat can were considered correct. The range of values used in determining correct ounces and/or servings is shown in table 4.

Table 4.--Relation of can sizes to contents and number of servings per can

Can size	Ounces		Servings per can
	Range	Usual	
	Number		Number
8Z ----------	8-9	8-3/4	1-2
2 ------------	18-23	20	4-5
303 ----------	15-18	16	3-4
2½ -----------	26-33	30	7-8
1 ------------	15½-18	16	3-4
1 flat -------	8-11	9	2-3

Source: National Canners Association, Net Contents Statement for Canned Food Labels, revised 1949, Washington, D. C.

Awareness was highest for the No. 2 can. Between 8 and 9 homemakers in 10 had heard of the No. 2 can. At the other extreme as few as 1 in 10 or less in Kansas City, San Francisco, and Atlanta had heard of the 8Z or 8 ounce can. In between these limits were the No. $2\frac{1}{2}$ can (between 55 and 75 percent were aware of this size), the No. 303, and the No. 1 can (both recognized by between 40 and 65 percent).

Awareness of the so-called nonexistent size, No. 5, was quite consistent in the 3 cities--about 15 percent; comments volunteered by respondents, however, indicated that generally homemakers were thinking of the large size juice can (the No. 3 cylinder).

Generally speaking, with the exception of the No. 2 can, the majority of those who had heard of a can size, were unable to state the "correct" ounces or servings to be obtained from the container. Correct ounces, in particular, were known by only a very small proportion--generally by less than 3 in 100. Knowledge of the "correct" number of servings was somewhat more widespread, ranging from around 4 in 10 for the No. 2 can to between 1 and 2 in 10 for the remaining can sizes (table 39).

The question of consumers' awareness of can size was also investigated in two recent studies conducted by the Department as a result of the cherry canning industries' shift to the use of the No. 303 size can from the No. 2 size can. Inquiry was made of the homemaker's level of knowledge of the two can sizes and a merchandising study was conducted at the retail level. The consumer study suggested that, in that instance also, consumers were relatively unaware of and unconcerned with can size. Results of these studies are available in published form. 1/

Overall attitudes and opinions.--In order to sum up respondents' opinions and attitudes concerning canned and frozen food containers, homemakers were asked to indicate all the things they liked about each, those features they didn't like, and their suggestions for changes and improvements.

First in terms of positive attributes for cans was storage--the fact that canned foods "can be stored indefinitely," "they are not as perishable," and "don't spoil as quickly." "Convenient and easy to store" was another reason homemakers gave frequently for liking canned foods, as was "canned foods require no refrigeration." The foregoing ideas were all included to some extent in the minds of those who felt that they could "keep more, or different foods on hand," and "buy in larger quantities." Convenience was another

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1/ Levine, Daniel B. Homemaker Preferences for Pies and Canned and Frozen Cherries in Dallas, Detroit, and Kansas City. U. S. Dept. Agr. Mktg. Res. Rpt. 116, 68 pp. April 1956.

Smith, Hugh M., and Clement, Wendell E. Merchandising of Selected Food Items in Grocery Stores: Canned Red Sour Cherries, Carrots, and Bananas. U. S. Dept. Agr. Mktg. Res. Rpt. 111, 21 pp. Feb. 1956.

important aspect in the consumers' mind. Cans are "easy to open," for example. Other important attributes were that cans are "available in a variety of sizes" and the "container (can) is unbreakable and doesn't leak" (table 40).

As far as dislikes or complaints are concerned, 4 features stood out. Homemakers particularly objected to the key-type can, finding it difficult or dangerous to open and hard to get the food out. Complaints were also registered concerning the opening of the regular can--"hard to open," "dislike to open," and "dangerous to open" were some of the common comments. Somewhat in the same vein, some homemakers found it difficult to dispose of cans because of their bulk. The one important reference to the effect of the can on the contents was expressed as, "contents get a peculiar taste over time, that is, the taste changes" (table 41).

A large majority--about two-thirds of the homemakers--indicated they were satisfied with the existing container; about one-third would like to see changes made. Improvements suggested include "more variety in can sizes," "an easier or better method of opening cans" (including more key-type openers with the key attached to the can), and "treating the can or placing a lining in the can to protect the food" (table 42).

Convenience was the major virtue attributed to frozen food containers--they are easy to open and easy to dispose of. Storage attributes were next in importance--the containers are "convenient and easy to store," "they take up less space," and "save space," and "they can be stacked easily" (table 43).

"A limited selection of sizes" was the feature most disliked. Complaints were also registered to the effect that "the containers are flimsy," "not well packed," and "juice runs out." Other homemakers disliked the method of opening and found them hard to open. Once open, the food was found to stick either to the container or the paper wrapping (table 44).

The number one complaint listed above became the first and most important suggestion--namely, more variety in container sizes. Other suggestions, mentioned by small numbers of homemakers, included "packaging contents in subdivided containers to permit partial use," "the use of zip tapes for easier opening," and the "use of replaceable tops or covers" (table 45).

The Label

Many different types of labels are used to identify and help merchandise food products. The labels of canned food packages today often have the complete sales story, including a statement of content, can size, servings, and instructions for use. This phase of the study attempted to ascertain the extent of reference to and opinions about the labeling information found on canned and frozen food containers.

Canned foods.--Homemakers were first asked to indicate those label items they might refer to in considering shifting to a different brand or a new form of a canned product. Brand name was the outstanding spontaneous response--

mentioned by 5 in 10 in Kansas City, 6 in 10 in Atlanta, and 7 in 10 in San Francisco. Weight, quantity, or can size were next, followed by price and ingredients (table 46).

The question was then rephrased with reference to the label items consulted during the regular shopping operation. Overall, brand name again led the list of label items referred to in buying canned vegetables, fruits, or juices. Between 80 and 90 percent of the homemakers in Atlanta, Kansas City, and San Francisco checked brand name. Around one-half of the respondents were interested in can size or weight, and about one-third in number of servings and recipes and cooking instructions. Price of the item was considered by some 1 in 5 (table 47).

To complete the preponderance of "brand name" as a label item, more than 60 percent of the homemakers selected it as the most important thing on the label. No other single item was mentioned by more than 1 in 10 (table 48). Brand seems to play a considerably stronger role than simply serving as a means of company identification. Once a consumer accepts a brand, the name itself then continues to serve as her guarantee of the contents over and above anything else printed on the label.

Relatively few women said they referred to the label for recipes and ways of preparing with any frequency during the immediate cooking situation. More than 6 in 10 indicated they use such label information "very seldom, hardly ever" or "not at all" (table 49).

In view of the above findings, it is interesting to note that one of the major label changes agreed upon by the small number who had suggestions was for more recipes on the label. They seem to need the sense of security in knowing that instructions are easily available even if they only refer to them occasionally. In all, however, only 1 and 2 homemakers in 10 had suggestions to offer. Despite the fact that the group was so small, their comments are included in the belief that they may be of interest to industry. In addition to the suggestion about recipes, homemakers suggested "stating the actual portions or servings," "making pictures or labels more accurate as to contents," "using larger print," and "placing the date packed and the number of calories on the label" (table 50).

As a final point, homemakers were asked whether they would be satisfied if the label contained only the brand name and identification of the contents. A majority of the respondents (about 6 in 10) indicated they preferred labels as they now exist; only around 1 in 3 were inclined to favor the expressed suggestion (table 51). Perhaps the reasons why homemakers believe the maximum amount of information should be on the label is best expressed in the following comments volunteered by respondents:

> "I wouldn't want to buy anything where they didn't have to put anything more than that on the can (brand name and contents). I read very little that's on it but still like for it to be there," and "I think they should put more than that on it. They might put inferior stuff in cans if they didn't have to tell more about it than that."

Frozen foods.--As was the case with canned foods, brand name was the key label item influencing the decision to try a different brand or new form of frozen food. Around half of the respondents mentioned it in answer to the question. Other label items which ranked high were recipes and instructions for use, price, weight and package size, and number of servings (table 52).

Brand name was again the predominant label feature during regular shopping for frozen foods--it was considered the most important thing on the label by a majority of those using frozen foods. Other label items referred to by large numbers of homemakers were package size and weight, number of servings, instructions on defrosting and care, and recipes and instructions on usage. Number of servings and package size and weight were of more importance to the shopper in Atlanta than in San Francisco or Kansas City; on the other hand, instructions on storing and defrosting and recipes were of more interest to the homemaker in San Francisco (tables 53 and 54).

Women using frozen foods are somewhat less sure of themselves regarding preparation than are those using canned foods, and are more likely to refer to the label for recipes and ways of preparing the food. Close to one-half of the homemakers in each of the 3 cities indicated that they used label recipes and instructions on a fairly regular basis, ranging from "always" to "once a month" (table 55). As to the usefulness of the instructional material, more than half of the homemakers considered it very useful and important; another 1 in 10 or so qualified the usefulness a bit more; the remaining 3 in 10 were not too enthusiastic, finding the instructions incomplete, not specific and so on (table 56).

Even more useful to the homemaker, apparently, were instructions on how to defrost and handle the food. Approximately one-third in Atlanta and 4 in 10 in Kansas City and San Francisco "always" referred to the label for this purpose; between 1 and 2 in 10 "always checked for new or different things" (table 57).

Overall, a majority of homemakers appeared satisfied with the labels on frozen food containers. More than 8 in 10 in each city could think of nothing they wanted changed, added or deleted (table 58). 2/ As if to reinforce this thought, between 7 and 8 out of each 10 homemakers rejected the idea that the label would be adequate if it contained nothing but the brand name and a statement of content, or as one respondent summed it up, "I think if we want to see all that stuff we should have the right to--it should be there" (table 59).

2/ Detail on suggested changes by the remainder of the group is not shown both because the group was too small for separate analysis and because no single suggestion received majority approval.

Handling and Storage

Another segment of the study considered the practices followed and the problems involved in storing canned and frozen foods.

Canned foods.--On the average, at the time of the survey, homemakers said they were keeping canned foods just over 2 weeks before using them, which, on the assumption of continued use or repeat purchases, implies an average of approximately 2 purchases per month for regularly used items (table 60).

Turning to the question of handling leftovers, almost all homemakers still believe in removing the contents from a can. Small proportions, only 5 percent in Atlanta and Kansas City and twice that number in San Francisco, indicated that they usually leave unused portions of canned foods in the can. The more education a homemaker has, the more likely she is to leave leftovers in the can (table 61).

Homemakers prefer not to leave their food in opened cans because of their belief that it is not safe to do so. In the 3 cities studied, a half to three-quarters of the respondents specifically answered that keeping food in the can after it has been opened is unsafe. Around 1 in 10 did not know (table 62).

Among those considering it unsafe, fear of poisoning was the number one reason, particularly in Atlanta and Kansas City where it was mentioned by almost 6 homemakers in 10; in San Francisco, only 1 homemaker in 4 was afraid of can poisoning; fear of spoilage was equally important (table 63).

On the other hand, among those considering it safe to leave food in open cans, "faith" might be considered the reason behind the action. Between 2 and 3 in 10 "just assume it's safe!" An additional 20 percent or so have "heard it said it's safe." The remainder gave reasons which suggest a bit more knowledge, such as "cans have been treated or processed," "cans are lined" and so on (table 64).

Along with the idea of safety, homemakers were asked whether storing leftovers in the can affects the taste of the product. Opinion was more evenly divided in the case of taste. Around 42 percent felt that the taste was not affected; a slightly higher proportion (about 48 percent) indicated that the taste would be affected by leaving the food in the opened can; the remainder were undecided. Among those who believed that the product would deteriorate in some manner, the prevalent opinion (mentioned by around 50 percent) was that the "food gets a tinny or canned taste." No other effect was mentioned by more than 1 in 10 (table 65).

Frozen foods.--The storage of frozen foods, in the minds of consumers, is somewhat more involved, requiring "specialized" and rather expensive storage facilities, low temperatures and so forth. The first step, then, in investigating problems involved in storing frozen foods was to determine the availability of storage space. As is generally true in urban United States, virtually all homes in the 3 cities were equipped with refrigerators. Availability of separate space in which to store frozen foods, however, is a somewhat different matter. About 44 percent of the households in Kansas City, for example, do not have separate freezer space in their refrigerators; the comparable proportion in San Francisco was 32 percent. At the other extreme, only 19 percent of those in Atlanta had refrigeration without some separate freezing space. In this study, incidentally, "separate space for storing frozen foods" was defined as a "freezer top" or specific space set aside in the refrigerator for use as frozen food space. Included is the ice cube section provided that food can be stored in addition to the cube trays.

In an attempt to obtain a very rough indication of average storage capacity, those homemakers having separate storage facilities in their refrigerators were asked to estimate the approximate size. (For conversion purposes, 1 cubic foot was assumed to hold 30 pounds). The average capacity ranged from 36 pounds in Atlanta to 39 pounds in San Francisco to 57 pounds in Kansas City. This was not the volume of food on hand--simply the space available.

An additional source of storage space is the food freezer, found in about 10 percent of the homes using frozen food in each of the 3 cities. As a rough indication, the average freezer size among the relatively small group possessing freezers ranged between 10.5 and 14 cubic feet (tables 5 and 66).

Table 5.--Freezer ownership and average size, by city

City	Own freezer	Average size	Frozen food users
	Percent	Cubic feet	Number
Atlanta -------	10	10.5	294
Kansas City ---	13	14.0	295
San Francisco -	11	12.0	282

The major storage complaint voiced by homemakers in each of the 3 cities was a plaintive "not enough space." However, relatively few respondents--about 2 in 10--voiced complaints; by far the majority had experienced no difficulty or problem in storing frozen food (table 67). Similarly, there was little comment on the effect of design or shape of container on storage. Among the very few homemakers pointing out problems, the fact that "round containers are difficult to store" was a common complaint.

Homemakers in the 3 cities showed remarkable consistency in their storage patterns. For example, at the time of the survey in June 1956, the average holding time for frozen foods in each of the cities--Atlanta, Kansas City, and San Francisco--was a little over 1 week; approximately three-fourths of the homemakers usually held frozen foods less than 3 weeks (table 68).

Around 9 homemakers in 10 usually made a practice of cooking the whole package of food at one time as follows:

	Cook the entire package
	Percent
Atlanta ------	93
Kansas City --	89
San Francisco-	94

As for the effect on taste of placing thawed uncooked frozen food back in the freezer, some 6 homemakers in 10 in each of the 3 cities believed that the taste of the food would not be affected in any way. Those who believed the taste was affected felt that the food "gets a stale taste, loses freshness, tastes spoiled or becomes flat or tasteless" (table 69).

The safety of refreezing thawed uncooked food, however, was a different matter. Between 4 and 6 in 10 homemakers in each city felt that this practice was unsafe, only 1 or 2 in 10 were sure it was safe to refreeze thawed frozen food and, some 3 or 4 in 10 were unsure or just didn't know. The main reason for this uneasiness appeared to be the frozen food label itself. More than half of the homemakers, when asked why they considered refreezing unsafe, answered, "the label tells you not to refreeze." Associated with this was the idea that the food "will spoil or deteriorate" if thawed and then refrozen (table 70).

Use and Servings of Specific Foods

The final section of the study was devoted to a number of questions relating to the use of specific foods, servings obtained, and the adequacy of the servings.

Canned foods.--The canned food products involved were peas, green beans, corn, peaches, pineapple, and tomato juice. Because it was thought that consumer reaction would differ from food to food, and the scope of the study did not permit an all inclusive list, an arbitrary selection was made. An effort was made to include those foods which are widely used so that the results would be a representative reaction to a sizable portion of processed foods by a majority of those interviewed. To that extent, the selection process succeeded--no one of the products was used by fewer than 60 percent of the homemakers; several were used by approximately 90 percent (table 6).

Table 6.--Use of selected canned foods, by city

Canned food item	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Peas	85	89	67
Green beans	60	80	60
Corn	78	91	77
Peaches	91	89	83
Pineapple	83	83	83
Tomato juice	65	64	59

Results of the inquiry into use patterns of the different products are as follows:

1. In general, for all of the canned food products included, the largest proportion of homemakers obtained around 4 servings from the No. 2 can (table 71).

2. When asked for the number of servings according to the label information, around one-half of the homemakers were unable to give an answer other than "don't know" for the vegetables and fruits included. The level of knowledge was even lower for tomato juice--more than 7 in 10 in Kansas City were unacquainted with the label information. Irrespective of product, among those able to give an answer, 1 in 5 said the label mentioned 4 to 5 servings (tables 72 and 73).

3. The average number of servings of any of the foods used at one meal was around 3. In any case, however, a majority of homemakers (around 5 or 6 in 10) considered the number of servings per container of food to be adequate for their family's use for one meal. The remainder were more than twice as likely to say that the size container used had too many rather than too few servings for one meal (tables 74, 75, 76, 77).

4. Consumers in Kansas City were best informed on can size for the foods included in the survey; least informed in San Francisco. For vegetables, the No. 2 size can was the one mentioned most often (between 2 and 4 in 10). The only other size mentioned by more than 1 in 10 was the No. 303 can, and that only in Kansas City. In the case of fruit, the No. 2½ can was favored in Kansas City and San Francisco for peaches; in Atlanta the one most widely used was the No. 2. Pineapple, on the other hand, was found in No. 1 flat cans, No. 2 and No. 2½ cans. Among those aware of specific can size for tomato juice--a relatively low percentage of consumers in Atlanta and San Francisco (30 percent); and about double that in Kansas City--the No. 2 can appeared to be the size common to all 3 cities. In Kansas City, however, the No. 3 cylinder was the best known. An indication that the specific designation for

this size is not too well known is seen in the fact that 15 and 25 percent of the homemakers in Atlanta and San Francisco, respectively, said they "use the large can," as compared with 10 percent in Kansas City where awareness of the No. 3 cylinder was at the 30 percent level (tables 78, 79, and 80).

Frozen food.--The specific frozen foods inquired about were peas, green beans, lima beans, peaches, strawberries, and orange juice concentrate. Use of these foods varied considerably between the 3 cities (table 7).

Table 7.--Use of selected frozen foods, by city

Frozen food item	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Peas	53	69	82
Green beans	43	40	68
Lima beans	76	48	54
Peaches	42	33	19
Strawberries	78	77	48
Orange juice	74	77	69

Frozen peas and green beans were the most popular vegetables in San Francisco; lima beans topped the group in Atlanta. Peaches and strawberries were used most extensively in Atlanta but in all 3 cities, strawberries were a heavy favorite over peaches. Frozen orange juice concentrate was widely used in each city.

Results of the inquiry into use patterns of the above mentioned frozen foods are as follows:

1. Close to half of the homemakers in each city obtained 4 servings from each of the packages of vegetables. Four servings was also the norm for homemakers in Atlanta using fruit; in the other 2 cities, the average was 3 servings, and as many as 1 in 3 homemakers obtained only 2 servings or less. Frozen orange juice concentrate yielded the most servings--1 in 3 obtained 4 servings and a slightly larger proportion got 6 or more servings (tables 81 and 82).

2. Sizable proportions of respondents were unacquainted with label information on the number of servings. Among those who were acquainted with label information, 4 to 5 servings was the usual answer, irrespective of the food item (tables 83 and 84).

3. The average number of servings used at one time for all of the different foods was around 3. In general, a majority of the homemakers felt that the number of servings they obtain is "about right" for their need *for one meal*. About 2 or 3 to 1 of the remainder of homemakers felt that frozen vegetables yield too many servings rather than too few. In the case of frozen fruits, opinion was almost equally divided between "too few" servings and "too many" servings; the division for users of frozen orange juice was equally between *too many* and the *right number*. Less than 1 user in 10 said *too few* (tables 85, 86, 87, and 88).

4. A majority of the homemakers in Atlanta, Kansas City and San Francisco were unable to specify the size of package used for any of the frozen products discussed. Somewhat over half of the homemakers in Atlanta, about 7 in 10 in Kansas City, and close to 8 in 10 in San Francisco either didn't know the size package used, or answered in such terms as "small, medium, large, or regular."

If the ounces printed on the packages are assumed to be the series of sizes recommended by the Department of Commerce, 3/ then many of the homemakers reporting specific content ounces were in error, which would further increase the size of the group not acquainted with package size (tables 89, 90, and 91).

3/ U. S. Dept. Commerce. Simplified Practice Recommendation 253-54, Retail Container Sizes (Net Weights) for Frozen Fruits and Vegetables. 6 pp. August 1954.

APPENDIX

Practice and Preference Regarding Packaging of Meats

As part of a consumer survey conducted in Cleveland, Ohio in the fall of 1956 on the use of and attitudes towards lamb, questions were asked dealing with consumers' shopping habits for meats including reference to prepackaging. It was felt that the results of these inquiries should be included since they provide additional information on consumers' reactions to the packaging of food--in this case meat.

About half of the homemakers in the city of Cleveland were found usually to buy their meats from a butcher; almost 4 in 10 utilized self-service facilities. Included, incidentally, in the group purchasing from a butcher were those homemakers who patronized stores containing self-service facilities but who availed themselves instead of the butcher's services in specifically requesting his attention.

In the matter of preference, homemakers were even more outspoken in favor of the butcher. Some 66 percent indicated they prefer to buy meat directly from a butcher or clerk; only 23 percent favored buying prepackaged meat at a self-service counter (table 92).

Homemakers preferred using the butcher or clerk in selecting meat over self-service mainly because of the quality of meat. About 5 homemakers in 10, for example, felt that meat purchased directly from the butcher or clerk was "fresher and not discolored;" it was "better quality meat--prime or choice." Equally important was the idea of selection (mentioned by 50 percent)--buying meat from a butcher permits the homemaker to have the meat cut to her specification, she can buy only the amount she desires, and she has a chance to select the specific cut, grade or quality she desires. Four homemakers in 10 felt that only in purchasing from a butcher do they have the opportunity to inspect the meat thoroughly or see both sides. One in 5 has greater overall confidence in the butcher (table 93).

Complaints with this type of shopping were mentioned by only 2 in 10 of those preferring it. Main criticisms dealt with the fact that this method is more time consuming and the meat is somewhat more expensive (table 94).

Those preferring self-service stressed heavily its convenience--it is quick, easy, convenient, and requires no waiting. They liked the opportunity of selecting the meat, and knowing the price and weight. The fact that the package permits personal inspection was also an important factor. Much less important were the health aspects of prepackaged meats and quality (table 95). Among the 1 in 4 registering criticism of their choice, the major complaint was that the self-service package conceals fat, bone, or other imperfections in the meat (table 96).

In summary, then, a majority of women in Cleveland, both in practice and in preference, lean toward buying meat from a butcher or clerk. Better quality and "versatility in selection" are the major attributes of purchasing meat in this fashion; necessity of waiting and greater cost are the expressed dissatisfactions. The butcher, in this instance, gives the homemaker confidence in the product the way a brand name does in processed foods. Self-service provides convenience and the ability to select the meat personally as its top appeals; concealment of imperfections by the package leads the criticisms.

Sample Design

A sample of 151 clusters containing approximately 600 dwelling units was selected from the 1955 city directory for Atlanta, Ga. Coverage of the city was as defined by the directory. Specific addresses were designated for the sample.

The sample in San Francisco, Calif., consisted of 189 clusters of approximately 760 households. The sample design was the same as for Atlanta.

In Kansas City, the sample contained 154 clusters totaling some 620 households, selected from the available city directory. As in the other 2 cities, clusters of 4 dwelling units were selected by taking every nth address in the directories, beginning with an address selected at random.

In each city, clusters were grouped in such a fashion as to allow for specified cut-off points when the desired number of interviews had been obtained. For this reason, the number of interviews taken in each city--427 in Atlanta; 412 in Kansas City; and 353 in San Francisco--is less than the total number of households selected in each sample.

Sampling Error

Data obtained from sample surveys are subject to sampling error and may differ somewhat from the results of a complete census. Statistical techniques are available, however, for estimating the magnitude of this difference. The formula used for determining confidence intervals for a sample such as was used for this study is:

$$1.25 \sqrt{\frac{pq}{n}}$$

where: $\underline{p}$ is the percentage of respondents possessing the given characteristics

$\underline{q}$ is the percentage not possessing the characteristics (100 - p)

$\underline{n}$ is the number of cases

The factor 1.25 is an adjustment for difference in the statistical efficiency between a simple random sample and the sample that was actually used. It is an assumed value based on previous experience with similar samples and subject matter.

The formula used for determining the significance of observed differences between subgroups within a sample was:

$$1.25 \sqrt{\frac{p_1 \; q_1}{n_1} + \frac{p_2 \; q_2}{n_2}}$$

where $\underline{p}$, $\underline{q}$, and $\underline{n}$ have the same meanings as above and the subscripts refer to the different subgroups.

In this report, differences are regarded as significant only if the probability of their occurrence as a result of sample variability is less than 1 in 3.

TABLES

The following tables show the percentage distribution of answers given to the questions asked for the study. The order of the tables corresponds generally to the presentation of topics in the text.

The income distributions used throughout the report represent total family income before taxes, as reported by the homemakers interviewed. For comparative purposes, the distribution by income for the combined samples was grouped very roughly into terciles; the "lower" income group includes family incomes up to $3,000; "middle" incomes are between $3,000 and $4,999; "upper" incomes are $5,000 and over. The income distributions varied between the 3 cities, as follows:

Median income in Atlanta - $3,634

Median income in Kansas City - $4,402

Median income in San Francisco - $4,828

For analytical purposes, families were grouped by size as follows:

Small families are those containing 1 or 2 members

Medium size families contain 3 or 4 members

Large families contain 5 or more members

The income, education, or age detail may add to fewer than the total number of cases in some instances because some respondents failed to give the desired classification information.

Detail generally is not shown where the base is smaller than 50 cases. Exceptions occur, however, where the data for 1 of the cities, although based on less than 50 cases, are presented for comparative purposes with the other 2 cities.

Table 8.--Use of canned and frozen food products by selected characteristics, by city

Selected characteristics	Atlanta			Kansas City			San Francisco		
	Can	Frozen	Cases	Can	Frozen	Cases	Can	Frozen	Cases
	Percent	Percent	Number	Percent	Percent	Number	Percent	Percent	Number
Total	96	69	429	96	72	412	93	80	353
Family size:									
Small	94	65	159	91	65	159	88	73	182
Medium	99	76	172	98	77	160	98	88	129
Large	98	62	97	100	73	92	97	87	40
Age:									
Under 35 years	98	78	130	97	77	134	96	93	98
35 to 44 years	98	63	98	99	75	92	94	79	71
45 to 64 years	95	65	137	97	75	125	94	75	125
65 years and over	92	58	48	85	45	55	85	70	40
Income:									
Low	96	50	153	90	55	92	90	69	48
Middle	100	73	74	98	75	119	97	81	107
High	96	91	129	99	85	142	96	87	136
Education:									
Grammar school	94	48	166	94	55	113	82	61	72
High school	98	79	188	95	75	218	95	82	197
College	98	91	66	100	86	79	99	94	78
Race:									
White	97	79	280	97	75	341	93	80	314
Other	97	50	146	90	57	70	94	75	36

Table 9.--Use of selected canned and frozen foods, by city

Food classes	Atlanta		Kansas City		San Francisco	
	Percent		Percent		Percent	
Used canned foods		96	----	96	----	93
Vegetables	86		90		75	
Fruits	88		86		80	
Juices	68		68		68	
Soups	72		67		73	
Meats	71		41		39	
Used frozen foods		69	----	72	----	80
Vegetables	55		59		72	
Fruits	38		39		23	
Juices	52		53		53	
Soups	9		9		10	
Meats	40		22		31	
Number of cases	429		412		353	

Table 10.--Use of specific canned food products among users of canned foods by selected characteristics, by city

City and selected characteristics	Vegetables	Fruits	Juices	Soups	Meats	Cases
	Percent	Percent	Percent	Percent	Percent	Number
ATLANTA						
Total canned food users ----	89	91	70	75	73	414
Family size:						
Small --------------------	85	83	65	68	63	149
Medium -------------------	92	94	74	82	76	170
Large --------------------	88	97	72	71	84	95
Age:						
Under 35 years -----------	90	95	73	76	81	128
35 to 44 years -----------	93	90	71	75	76	96
45 years and over --------	86	89	70	74	67	174
Income:						
Low ----------------------	86	88	75	71	81	147
Middle -------------------	92	93	73	74	73	74
High ---------------------	91	91	69	74	69	127
Education:						
Grammar school -----------	89	87	72	74	73	156
High school --------------	87	94	70	74	78	185
College ------------------	94	91	66	82	62	65
Race:						
White --------------------	93	92	70	75	75	271
Other --------------------	82	89	70	73	71	141
KANSAS CITY						
Total canned food users ----	94	90	71	71	43	394
Family size:						
Small --------------------	90	84	69	60	41	144
Medium -------------------	97	92	73	76	43	157
Large --------------------	92	93	72	78	45	92
Age:						
Under 35 years -----------	94	90	71	73	50	130
35 to 44 years -----------	96	92	76	77	45	91
45 years and over --------	93	88	69	66	36	168
Income:						
Low ----------------------	90	83	75	64	30	83
Middle -------------------	96	93	68	69	48	117
High ---------------------	95	90	70	76	44	140
Education:						
Grammar school -----------	92	89	76	67	37	106
High school --------------	95	91	67	73	49	207
College ------------------	92	86	76	68	34	79
Race:						
White --------------------	96	91	72	74	45	330
Other --------------------	83	84	70	54	33	63
SAN FRANCISCO						
Total canned food users ----	81	86	73	79	42	328
Family size:						
Small --------------------	77	86	70	76	35	160
Medium -------------------	82	86	71	81	47	127
Large --------------------	90	85	90	85	51	39
Age:						
Under 35 years -----------	78	84	76	88	44	94
35 to 44 years -----------	87	81	76	73	39	67
45 years and over --------	81	89	70	76	42	151
Income:						
Low ----------------------	81	86	65	79	42	43
Middle -------------------	84	86	69	79	38	104
High ---------------------	78	85	73	79	42	131
Education:						
Grammar school -----------	78	83	71	76	41	59
High school --------------	83	87	72	79	41	187
College ------------------	77	86	77	81	45	77
Race:						
White --------------------	81	86	73	80	42	291
Other --------------------	82	82	68	71	44	34

Table 11.--Use of specific frozen food products among users of frozen foods by selected characteristics, by city

City and selected characteristics	Vegetables	Fruits	Juices	Soups	Meats	Cases
	Percent	Percent	Percent	Percent	Percent	Number
ATLANTA						
Total frozen food users ---	81	56	76	13	59	294
Family size:						
Small ------------------	78	44		14	50	104
Medium -----------------	82	65	89		67	130
Large ------------------	83	55	72	7	57	60
Age:						
Under 35 years ----------	81	50	80	12	66	101
35 to 44 years ----------	85	68	82	13	63	62
45 years and over -------	79	56	67	14	50	117
Income:						
Low --------------------	73	45	64	13	57	77
Middle -----------------	80	46	67	6	54	54
High -------------------	85	62	85	14	62	119
Education:						
Grammar school ----------		53	69	13	55	80
High school ------------	85	54	74	11	59	149
College ----------------	87	62	87	17	62	60
Race:						
White ------------------	81	59	78	14	60	220
Other ------------------	81	47	67	10	53	73
KANSAS CITY						
Total frozen food users----	83	54	74	12	30	295
Family size:						
Small ------------------	90	54	69	16	22	104
Medium -----------------	84	55	76	13	39	124
Large ------------------	70	52	76	4	27	67
Age:						
Under 35 years ----------	79	55	73	11	34	103
35 to 44 years ----------	78	54	80	13	33	69
45 years and over -------	89	52	70	13	25	119
Income:						
Low --------------------	84	51	67	8	31	51
Middle -----------------	76	55	66	10	28	89
High -------------------	88	56	82	17	30	121
Education:						
Grammar school ----------	84	52	50	5	27	62
High school ------------	82	54	75	12	32	164
College ----------------	85	57	91	19	26	68
Race:						
White ------------------	82	55	77	13	28	255
Other ------------------	90	47	50	10	45	40
SAN FRANCISCO						
Total frozen food users ---	90	29	66	13	38	282
Family size:						
Small ------------------	90	26	57	13	32	133
Medium -----------------	93	32	74	15	48	113
Large ------------------	80	26	71	6	34	35
Age:						
Under 35 years ----------	84	31	69	11	48	91
35 to 44 years ----------	95	34	77	18	48	56
45 years and over -------	93	26	61	11	26	122
Income:						
Low --------------------	85	21	70	6	42	33
Middle -----------------	89	24	66	11	38	87
High -------------------	92	34	67	16	40	119
Education:						
Grammar school ----------	89	20	61	9	32	44
High school ------------	91	27		14	41	162
College ----------------	90	38	71	12	38	73
Race:						
White ------------------	90	29	65	12	35	252
Other ------------------	89	89	41	30	63	27

Table 12.--Use of fresh vegetables and fresh fruits by selected characteristics and city

Selected characteristics	Atlanta			Kansas City			San Francisco		
	Fresh vegetables	Fresh fruits	Cases	Fresh vegetables	Fresh fruits	Cases	Fresh vegetables	Fresh fruits	Cases
	Percent	Percent	Number	Percent	Percent	Number	Percent	Percent	Number
Total	98	94	417	99	92	401	99	96	336
Family size:									
Small	97	93	150	98	86	150	98	93	168
Medium	99	97	170	99	96	158	100	99	127
Large	99	91	97	100	92	92	100	100	39
Age:									
Under 35 years	98	96	129	99	94	132	100	99	96
35 to 44 years	98	85	96	100	96	91	100	100	69
45 years and over	98	92	176	98	87	173	97	93	155
Income:									
Low	99	93	148	100	80	87	100	95	44
Middle	100	97	74	99	94	118	98	96	105
High	98	97	126	99	96	142	99	95	133
Education:									
Grammar school	98	90	156	100	82	106	100	92	62
High school	98	97	187	99	95	214	98	96	192
College	97	97	66	97	94	79	99	99	77
Race:									
White	98	95	273	99	93	335	99	96	298
Other	98	93	142	100	82	65	100	97	35

Table 13.--Frequency of use of selected canned foods, by city

Frequency	Atlanta					Kansas City					San Francisco				
	Vegetables	Fruits	Juices	Soups	Meats	Vegetables	Fruits	Juices	Soups	Meats	Vegetables	Fruits	Juices	Soups	Meats
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
7 or more times a week --	17	12	30	6	7	36	23	35	9	5	10	17	24	10	2
6 times a week ----------	1	1	2	2	1	3	1	1	2	1	1	1	1	1	--
5 times a week ----------	1	1	1	1	1/*	3	2	1	*	1	1	*	1	1	--
4 times a week ----------	8	5	4	4	4	9	6	5	7	1	4	7	4	5	2
3 times a week ----------	10	11	5	6	5	10	11	6	10	3	7	7	4	7	2
2 times a week ----------	28	29	16	23	24	21	29	14	24	10	26	26	18	24	8
1 time a week ----------	22	25	21	23	30	12	14	19	17	21	22	18	21	18	15
1 - 3 times a month -----	11	14	19	29	25	6	11	16	23	54	25	21	21	30	59
Less than once a month --	*	1	--	1	1	*	1	1	*	--	1	*	--	*	6
Not ascertained ---------	2	1	2	5	3	*	2	2	8	4	3	3	6	4	6
Number of cases ------	368	376	290	309	304	369	353	281	278	168	265	282	239	259	137
Median times a month -	11.3	10.0	11.3	7.8	7.8	17.8	12.1	12.6	10.0	3.7	8.7	10.4	10.0	8.7	3.1

1/ Asterisk denotes less than 1 percent.

Table 14.--Frequency of use of selected frozen foods, by city

Frequency	Atlanta				Kansas City				San Francisco			
	Vegetables	Fruits	Juices	Meats	Vegetables	Fruits	Juices	Meats	Vegetables	Fruits	Juices	Meats
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
7 or more times a week -----	10	2	41	5	8	2	40	3	17	1	38	3
6 times a week -------------	1	1	2	1	1/*	--	1	1	3	--	3	1
5 times a week -------------	1	1	*	1	2	1	2	--	1	--	2	--
4 times a week -------------	6	1	3	2	8	4	7	--	9	--	4	2
3 times a week -------------	11	5	5	5	12	2	7	5	10	--	7	2
2 times a week -------------	25	17	14	16	26	16	13	16	27	14	16	10
1 time a week -------------	24	29	20	28	24	31	12	21	12	16	8	20
1 - 3 times a month --------	18	36	9	33	16	39	14	42	17	59	19	53
Less than once a month -----	--	2	--	3	--	--	--	2	--	5	--	1
Not ascertained ------------	4	6	6	6	4	5	4	10	4	5	3	8
Number of cases --------	238	164	222	173	245	159	217	89	254	80	186	108
Median times a month ---	9.5	5.6	16.5	6.1	10.0	5.6	18.6	4.3	11.7	3.2	16.5	3.6

1/ Asterisk denotes less than 1 percent.

Table 15.--Frequency of use of fresh vegetables and fruits, by city

Frequency	Atlanta		Kansas City		San Francisco	
	Vegetables	Fruits	Vegetables	Fruits	Vegetables	Fruits
	Percent		Percent		Percent	
7 or more times a week ---------	53	53	64	58	60	70
6 times a week --	2	2	2	3	4	3
5 times a week --	2	2	2	1	3	1
4 times a week --	9	6	5	4	8	6
3 times a week --	9	8	5	5	5	4
2 times a week --	15	12	14	15	13	8
1 time a week ---	7	11	5	6	4	3
1 to 3 times a month ----------	1	4	1	4	2	3
Not ascertained number of times used -----------	2	2	2	4	1	2
Number of cases ------	409	392	397	367	332	323
Median times per month --	30 +	30 +	30 +	30 +	30 +	30 +

Table 16.--Reasons for nonuse of frozen foods, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Expensive; costs too much ---	23	21	9
Prefer fresh or canned foods	19	3	20
No place to store them ------	14	24	10
Some family member does not like them -----------------	7	2	6
Habit; just haven't tried it, haven't thought of it ------	6	6	10
Prefer to prepare own food --	4	4	6
Don't like taste; doesn't taste right ---------------	4	4	4
Time consuming, trouble -----	4	2	3
Doesn't taste fresh or natural -------------------	3	5	2
Not enough food value, vitamins ------------------	2	3	4
Doesn't taste as good as fresh or canned -----------	2	1	3
Not available in store ------	2	1	--
Has no taste; tasteless, flat	1	9	7
On a diet for health --------	1	4	4
Eat few meals at home -------	1	2	7
Not convenient; not handy (unspecified) -------------	--	--	3
Other reasons ---------------	6	6	2
Not ascertained -------------	1	3	--
Number of cases ---------	106	111	69

Table 17.--Reasons for nonuse of canned meats, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent [1]	Percent [1]	Percent [1]
Some family member doesn't like it	21	13	15
Prefer other form	13	10	15
Doesn't taste as good as other forms	9	5	7
Habit; just haven't tried it; haven't thought of it	7	9	12
Expensive; costs too much	6	15	4
Don't like taste; doesn't taste right	6	9	11
On a diet for health	6	7	4
Prefer to prepare own	6	6	7
Doesn't taste fresh or natural	6	5	4
Serve only in winter (not a hot weather dish)	5	[2] *	--
Has no taste; tasteless, flat	3	6	8
Tastes like can; tastes tinny	2	6	2
Can't get exact amount wanted; too small or large for size of family	2	2	3
Has filler in it; adulterated, preservative added	2	2	2
Not sure it's fresh, might be old	2	2	1
Like to see meat; can't see what's in it	2	1	2
Not enough food value, vitamins	1	2	5
Poor quality	1	1	3
Too salty	--	6	2
Too much waste, fat	--	*	2
Other reasons	8	11	10
Not ascertained	6	3	5
Number of cases	108	223	188

[1] Percentages add to more than 100 because some respondents gave more than 1 reason.
[2] Asterisk denotes less than 1 percent.

Table 18.--Reasons for nonuse of canned juices, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent [1]	Percent [1]	Percent [1]
Doesn't taste fresh or natural	23	17	16
Some family member doesn't like it	17	13	25
Prefer fresh or frozen	15	13	15
On a diet for health	10	7	11
Tastes like can; tastes tinny	6	14	7
Don't like taste; doesn't taste right	6	1	3
Expensive, costs too much	5	7	2
Habit; just haven't tried it, haven't thought of it	4	13	8
Has no taste, tasteless, flat, watery	3	4	2
Not enough food value, vitamins	2	6	--
Too sour, bitter	2	4	3
No place to store it	2	2	--
Too sweet, too much sugar	2	1	3
Time consuming, trouble	2	1	--
Does not taste as good as fresh or frozen	2	--	8
Use only when ill	2	--	--
Quantity not right for size of family	--	3	--
Other reasons	8	10	3
Not ascertained	4	1	4
Number of cases	124	112	89

[1] Percentages add to more than 100 because some respondents gave more than 1 reason.

Table 19.--Reasons for nonuse of canned soups, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Prefer to prepare own	35	30	31
Serve only in winter (not a hot weather dish)	29	39	12
Some family member doesn't like soup	23	10	22
Expensive; costs too much	5	10	3
Don't like taste; doesn't taste right	5	4	6
Habit; just haven't tried it	5	4	4
On a diet for health	5	2	4
Does not taste as good as other forms	3	5	9
Used only when ill	2	1	1
Has no taste; tasteless, flat	1	3	4
Eat few or no meals at home	1	2	1
Other reasons	3	7	7
Not ascertained	3	4	3
Number of cases	104	114	67

1/ Percentages add to more than 100 because some respondents gave more than 1 reason.

Table 20.--Reasons for nonuse of frozen soups, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Didn't know frozen soups were available	28	15	3
Habit; just haven't tried it, haven't thought of it	20	25	37
Prefer to prepare own	15	11	10
Some family member doesn't like soup or frozen soup	13	6	11
Expensive; costs too much	10	16	15
Prefer other form	3	1	2
Serve only in wintertime (not a hot weather dish)	2	9	2
No place to store	2	7	4
Not available in store	2	4	1
Doesn't taste as good as other forms	2	2	--
Dislike taste; doesn't taste right	2	1	3
Limited variety	1	6	9
Time consuming, trouble	--	2	2
Other reasons	3	9	4
Not ascertained	5	3	4
Number of cases	255	259	246

1/ Percentages add to more than 100 because some respondents gave more than 1 reason.

Table 21.--Reasons for nonuse of frozen meats, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent [1]	Percent [1]	Percent [1]
Prefer other form	18	9	20
Doesn't taste as good as other forms	14	2	5
Expensive; costs too much	13	26	10
Prefer to prepare own	9	16	12
Some family member doesn't like frozen meat	7	2	5
Has no taste; tasteless, flat	6	9	7
Don't like taste; doesn't taste right	6	2	3
Habit; just haven't tried it; haven't thought of it	5	11	17
No place to store it	5	9	9
Time consuming; trouble	3	3	3
Too dry, all juice out of it	3	3	2
Taste not fresh or natural	3	3	1
Like to see product, can't see what's in it	3	2	1
Not sure it's fresh, might be old	3	[2] *	2
Not enough nourishment, food value	3	*	1
Can't get exact amount wanted--too large or small for family size	2	1	5
Eat few or no meals at home	2	*	--
Not available in store, didn't know it was available	1	3	3
Poor quality, not as good quality	--	1	3
Other reasons	8	11	8
Not ascertained	6	2	3
Number of cases	120	202	173

[1] Percentages add to more than 100 because some respondents gave more than 1 reason.
[2] Asterisk denotes less than 1 percent.

Table 22.--Reasons for nonuse of frozen juices, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent [1]	Percent [1]	Percent [1]
Prefer fresh or canned	22	6	12
Habit; just haven't tried it, haven't thought of it	15	23	20
Some family member doesn't like it	15	10	20
Expensive, costs too much	14	17	13
On a diet for health	8	6	6
No place to store	7	9	3
Does not taste as good as fresh or canned	7	--	1
Time consuming, trouble, difficult to prepare	4	10	10
Taste not fresh or natural	3	8	3
Not enough food value, vitamins	2	--	--
Too sweet, too much sugar	1	3	1
Tasteless, flat, watery	1	3	1
Can't get right quantity; too large or small for family size	1	1	3
Too sour, bitter, tart	1	1	2
Other reasons	7	5	5
Not ascertained	4	5	2
Number of cases	72	78	94

[1] Percentages add to more than 100 because some respondents gave more than 1 reason.

Table 23.--Reasons for nonuse of frozen fruits, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Prefer fresh or canned	23	12	19
Expensive; costs too much	17	31	24
Habit; just haven't tried it, haven't thought of it	15	11	17
Some family member doesn't like frozen fruits	8	5	6
Don't like taste; doesn't taste right	6	--	1
No place to store	5	11	3
Does not taste as good as fresh or canned	5	4	3
Taste not fresh or natural	5	4	2
Not enough vitamins, food value	4	2	--
Has no taste, tasteless, flat	4	1	1
On diet for health	3	7	3
Prefer to prepare own	3	4	7
Didn't know it was available, not available in store	3	1	1
Too sweet, too much sugar	2	4	4
Time consuming, trouble	2	3	4
Too soft, mushy	2	2	5
Too much water, liquid	2	--	--
Can't get right amount, too large or small for family size	1	2	2
Limited variety	--	2	2
Other reasons	4	3	4
Not ascertained	5	5	2
Number of cases	130	136	201

1/ Percentages add to more than 100 because some respondents gave more than 1 reason.

Table 24.--Reasons for nonuse of frozen vegetables, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Prefer fresh or canned	29	10	29
Expensive, costs too much	15	30	18
Prefer to prepare own	11	6	--
Does not taste as good as fresh or canned	11	4	4
Taste not fresh or natural	9	10	4
Has no taste, tasteless, flat	7	12	7
No place to store	5	18	11
Habit; just haven't tried it	5	2	7
Don't like taste; doesn't taste right	5	--	--
Eat few or no meals at home	5	--	--
Some family member doesn't like frozen vegetables	4	10	11
Not enough vitamins	2	2	--
Frosty taste	2	--	--
Time consuming, trouble	--	4	7
Quantity too large for family	--	4	4
Limited variety	--	4	--
On diet for health	--	2	--
Too soft, mushy	--	2	--
Other reasons	4	6	--
Not ascertained	5	4	4
Number of cases	55	50	28

1/ Percentages add to more than 100 because some respondents gave more than 1 reason.

Table 25.--Preference for fresh, canned or frozen vegetables and fruits, by city

Prefer	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Vegetables:			
Fresh	78	59	70
Canned	7	17	5
Frozen	10	16	18
No preference	5	8	6
Not ascertained	--	--	1
Fruits:			
Fresh	70	63	76
Canned	14	21	12
Frozen	4	5	1
No preference	11	10	10
Does not use fruits	--	1	[1] *
Not ascertained	1	--	1
Number of cases	417	401	336

[1] Asterisk denotes less than 1 percent.

Table 26.--Choice between canned or frozen vegetables and fruits for homemakers preferring other forms, by city

Prefer	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Vegetables:			
Canned	43	43	20
Frozen	43	45	66
No preference	12	12	12
Not ascertained	2	[1] *	2
Fruits:			
Canned	58	55	63
Frozen	23	29	17
No preference	14	12	18
Does not use fruits	--	1	*
Not ascertained	5	3	2
Number of cases	417	401	336

[1] Asterisk denotes less than 1 percent.

Table 27.--Reasons for preferring canned vegetables, by city

Reasons	Prefer canned vegetables					
	Atlanta		Kansas City		San Francisco	
	Percent 1/		Percent 1/		Percent 1/	
Preparation		27		35		31
Ready to use, cooks quickly, less ~~trouble~~ to prepare	18		26		22	
Easy to prepare, use, serve, or eat	9		8		7	
Know how to prepare (don't know how to prepare other form)	1		1		2	
Other preparation reasons	--		3		--	
Taste and flavor		27		22		28
Good, better, tasty	10		6		4	
Not flat tasting, not tasteless	7		8		9	
Tastes like fresh, tastes natural	5		3		3	
Taste unspecified; just like taste	3		3		9	
Different taste	--		1		2	
Other taste reasons	2		1		1	
Economy		19		22		16
Not as expensive, economical	17		18		12	
Right amount for self or family	2		5		3	
No waste, little waste	1		1		1	
Storage		18		22		9
Easy to store, no need to store	11		17		9	
Keeps longer, not perishable	7		5		--	
Habit		14		6		15
Have never used other form, little use of it	10		3		9	
Just used to it, habit	4		3		6	
Food attribute		6		8		3
Tender	2		2		--	
Better color	2		--		--	
Firm texture	1		3		--	
Better quality (general)	--		1		2	
Other food attributes	1		3		1	
Health		4		5		7
Cleaner, no worms, cockleburr, etc., in it	2		1		--	
More food value, more vitamins, nutritious	1		2		4	
Better for you, more healthy for you	1		--		3	
Other health reasons	1		3		--	
General		10		13		18
Can get more varieties	4		3		--	
Just like it; just prefer it	2		1		3	
Know its not old, stale	2		1		--	
Some member of family prefers it	1		5		6	
Availability	1		1		3	
Convenience (not specified)	--		1		3	
Looks better, looks fresher	--		--		2	
Other general reasons	3		2		1	
Not ascertained		1		1		3
Number of cases	177		172		67	

1/ Percentages may add to more than their subtotals and these add to more than 100 because some respondents gave more than 1 reason.

Table 28.--Reasons for preferring frozen vegetables, by city

Reasons	Prefer frozen vegetables					
	Atlanta		Kansas City		San Francisco	
	Percent 1/		Percent 1/		Percent 1/	
Taste and flavor	----	64	----	66	----	63
Tastes like fresh, tastes natural	46		51		51	
Good, better, tasty	10		9		8	
No tinny taste, no canny taste	6		2		2	
Not flat tasting, not tasteless	2		4		1	
Just like taste (unspecified)	--		1		3	
Other taste reasons	1		2		1	
Preparation	----	28	----	32	----	35
Ready to use, already cleaned	18		20		18	
Easy to prepare, use, serve, or eat	6		6		9	
Can be cooked in preferred manner, in more different ways	2		4		2	
Can be seasoned to taste, like to season own	2		2		--	
Not cooked, not overcooked	1		2		6	
Know how to prepare (don't know how to prepare other form)	--		1		--	
Food attribute	----	17	----	20	----	21
More like fresh (unspecified)	9		8		10	
Better color	5		8		3	
Firm texture	2		2		4	
Tender	2		1		--	
Better quality (general)	1		2		5	
Other food attributes	--		1		1	
Health	----	8	----	17	----	6
More food value, more vitamins, nutritious	5		14		4	
Cleaner, no worms, cockleburrs, no germs	2		1		--	
Better for you, more healthy for you	1		1		1	
Other health reasons	2		2		1	
Economy	----	6	----	7	----	5
No waste, little waste	3		3		1	
Not as expensive, economical	2		2		3	
Right amount for self or family	1		2		1	
General	----	14	----	12	----	15
Know it's not old, stale	3		2		4	
Just like it; just prefer it	3		--		1	
Looks better, looks fresher	2		2		1	
Convenience (not specified)	2		1		1	
Easy to store	1		3		2	
Keeps longer, not perishable	1		1		2	
Availability	--		2		1	
Other general reasons	3		3		3	
Not ascertained	----	1	----	1	----	1
Number of cases	177		179		221	

1/ Percentages may add to more than their subtotals and these add to more than 100 because some respondents gave more than 1 reason.

Table 29.--Reasons for preferring canned fruits, by city

Reasons	Prefer canned fruits					
	Atlanta		Kansas City		San Francisco	
	Percent 1/		Percent 1/		Percent 1/	
Economy		27		25		21
Not as expensive, economical	25		22		19	
Right amount for self and family	2		2		3	
Other economy reasons	--		1		--	
Taste and flavor		25		17		23
Good, better, tasty	7		5		7	
Fresher, taste like fresh, taste natural	6		3		1	
More flavor, not flat tasting, not tasteless	5		2		3	
Taste unspecified, just like taste	4		2		3	
Delicious, sweet (natural sweetness)	3		2/ *		2	
Less sugar, not as sweet	1		3		4	
Other taste reasons	--		2		3	
Preparation		22		26		21
Ready to use, already picked over, does not have to defrost	15		19		12	
Easy to prepare, use, serve or eat	5		6		9	
Can be cooked in preferred manner	2		*		--	
Other preparation reasons	*		1		1	
Availability		13		15		13
Available in more varieties	8		10		9	
Available in all seasons	5		5		4	
Habit		13		9		17
Have never used other form	9		5		14	
Habit; just used to it	4		4		3	
Storage		12		21		12
Easy to store, no need to store	7		14		8	
They keep longer, not perishable	5		10		4	
Food attribute		10		9		11
Tender	3		1		1	
Firm texture	2		3		5	
Juicy--lots of juice in it	2		1		1	
Likes the syrup	--		1		2	
Other food attributes	3		3		2	
Health		3		4		5
Cleaner, no worms, no germs, sanitary	2		1		--	
Better for you, more healthy for you	*		1		2	
Other health reasons	1		2		3	
General		7		7		6
Just like it; just prefer it	3		3		1	
Some member of family prefers it	1		1		2	
Other general reasons	3		3		3	
Not ascertained		2		2		4
Number of cases	242		220		210	

1/ Percentages may add to more than their subtotals and these add to more than 100 because some respondents gave more than 1 reason.
2/ Asterisk denotes less than 1 percent.

Table 30.--Reasons for preferring frozen fruits, by city

Reasons	Prefer frozen fruits					
	Atlanta		Kansas City		San Francisco	
	Percent 1/		Percent 1/		Percent 1/	
Taste and flavor		62		74		67
Fresher, tastes like fresh, fresh taste	43		63		47	
Good, better, tasty	10		7		9	
Not tinny taste, not canny	4		2		2	
More flavor, not flat tasting, not tasteless	2		3		2	
Delicious, sweet, (natural sweetness)	2		1		--	
Less sugar, not as sweet	1		3		4	
Taste unspecified, just like taste	--		1		5	
Other taste reasons	3		--		--	
Preparation		16		14		7
Easy to prepare, use, serve or eat	8		1		4	
Ready to use, cook, clean, already picked over	6		8		5	
Not cooked, not overcooked	2		3		--	
Other preparation reasons	--		3		--	
Food attribute		15		15		21
More like fresh (unspecified)	12		8		11	
Better color	1		4		2	
Firm texture	1		1		4	
Better quality (general)	--		1		5	
Other food attributes	1		2		--	
Health		7		8		9
More food value, vitamins, etc.	7		8		7	
Other health reasons	1		1		2	
Economy		1		3		2
Not expensive, economical	1		1		2	
No waste; little waste	--		2		--	
Other economy reasons	--		1		--	
General		10		13		14
Knows that its not old, stale	3		3		5	
Just like it; just prefer it	3		2		5	
Availability	2		2		--	
Can get more varieties	1		1		2	
Easy to store	--		2		--	
Looks better, looks fresher	--		2		--	
Other general reasons	1		4		2	
Not ascertained		5		2		4
Number of cases	94		119		57	

1/ Percentages may add to more than their subtotals and these add to more than 100 because some respondents gave more than 1 reason.

Table 31.--Comparison of quality of canned and frozen food products, by city

Quality comparison	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Get better quality from:			
Canned foods	22	16	10
Frozen foods	37	43	44
No difference	25	32	33
Don't know and not ascertained	16	9	13
Number of cases	417	401	336

Table 32.--Reasons for feeling frozen foods are better quality than canned, by city

Reasons	Atlanta		Kansas City		San Francisco	
	Percent 1/		Percent 1/		Percent 1/	
Freshness	----	41	----	32	----	51
Just like fresh, put up fresh	17		9		15	
Natural flavor, fresh flavor	11		10		23	
Fresher than canned (unspecified)	8		2		5	
Looks fresher, prettier	4		2		3	
Process preserves fresh flavor	3		9		6	
Other freshness qualities	1		--		1	
Health	----	33	----	24	----	12
Preserves vitamins, has more food value	25		15		9	
Looks cleaner, more sanitary, more protected from germs	6		9		3	
Healthier (general)	3		--		--	
Method of selection	----	23	----	40	----	31
Use choice products, top grade, select food	8		13		8	
Processed as soon as picked, at right time	4		9		8	
Picked at peak of crop	3		3		3	
Process preserves the quality	3		1		3	
Never find spoiled, spotted or blemished food	1		2		--	
Uniform quality, only one grade, no inferior grades, consistently good	--		1		3	
Other quality reasons	6		13		7	
General	----	20	----	26	----	25
Taste better	6		5		9	
Better, natural color	4		8		7	
More tender	4		1		--	
Can see the food better so have to use better quality, can't disguise it in liquids	1		5		6	
Contents more firm	1		4		3	
Won't keep unless best quality	--		2		1	
Other general reasons	5		5		2	
Not ascertained and don't know	----	5	----	2	----	3
Number of cases	155		175		148	

1/ Percentages may add to more than their subtotals and these add to more than 100 because some respondents gave more than 1 reason.

Table 33.--Reasons for feeling that canned foods are better quality than frozen, by city

Reasons	Atlanta		Kansas City		San Francisco	
	Percent 1/		Percent 1/		Percent 1/	
Health		23		5		9
Preserves vitamins, has more nourishment, food value	10		2		9	
Looks cleaner, more sanitary, more protected from germs	8		3		--	
Healthier (general)	6		--		--	
Other health reasons	1		--		--	
Freshness		13		13		15
Process preserves fresh flavor	6		10		12	
Natural flavor, fresh flavor	4		2		3	
Other freshness qualities	3		2		--	
Taste; better taste, flavor		12		17		12
Method of selection		12		17		32
Use better quality (unspecified)	6		10		12	
Process preserves the quality	2		2		3	
Picked at peak of crop	2		--		3	
Use choice products, top grade, select food products	1		3		6	
Processed as soon as picked, at right time	--		2		3	
Never find spoiled, spotted or blemished food	--		2		3	
Other quality reasons	1		--		3	
Lack of experience, haven't used frozen foods		10		19		6
General		27		23		23
Packed air tight	8		3		--	
Won't keep unless best quality	3		6		9	
More tender	3		3		--	
More firm	2		8		--	
Better natural color	1		2		--	
Other general reasons	14		5		15	
Not ascertained and don't know		16		17		9
Number of cases	93		63		34	

1/ Percentages may add to more than their subtotals and these add to more than 100 because some respondents gave more than 1 reason.

Table 34.--Reasons for feeling there is no quality difference between canned and frozen foods, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Both are good quality, equal, couldn't sell bad quality ----------------------	64	57	57
Depends on brand, grade, good brands of both, good grades of both ------------	26	35	31
Both have bad features ----------------	4	2	--
Some products are better frozen, some canned --------------------------------	3	5	11
Other reasons ------------------------	3	1	1
Number of cases --------------	105	127	112

Table 35.--Type of container considered most convenient to use, by city

Prefer	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Cans --------------------	42	34	27
Frozen food containers ---	38	47	46
No preference ------------	15	17	17
Not ascertained ----------	5	2	10
Number of cases ------	417	401	336

Table 36.--Reasons for preferring frozen food containers, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Easy to open	76	59	67
Easy to dispose of, don't take up much room in trash	24	53	48
Take up less space; no space to store cans	8	13	11
Easy to store	7	5	8
Can leave leftovers in package, etc.	4	2	--
More sanitary, cleaner container	2	2	2
Lighter to carry	2	1	6
Can be stored indefinitely	2	--	--
Other reasons	6	5	4
Not ascertained	4	2	3
Number of cases	160	188	156

1/ Percentages add to more than 100 because some respondents gave more than 1 reason.

Table 37.--Reasons for preferring cans as containers, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Easy to open	40	43	41
Easy to store (no place to store other)	14	20	23
More storage space available	13	11	10
Can be stored indefinitely; not as perishable	11	11	18
Habit; never used frozen container	8	7	5
More sanitary, cleaner container	6	3	2
More durable; won't break, leak	3	3	4
Easy to dispose of	2	3	4
Food doesn't stick; can be easily removed	2	1	2
Other reasons	3	3	5
Not ascertained	14	13	9
Number of cases	173	137	91

1/ Percentages add to more than 100 because some respondents gave more than 1 reason.

Table 38.--Reasons for dissatisfaction with present sizes of frozen food containers, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Too small; not enough servings	47	55	46
Too large; have leftovers	33	30	37
Not enough variety in sizes	17	14	11
Not ascertained	3	1	6
Number of cases	95	138	110

Table 39.--Awareness of selected can sizes, by city

Awareness	No. 2						No. 303						No. $2\frac{1}{2}$					
	Atlanta		Kansas City		San Francisco		Atlanta		Kansas City		San Francisco		Atlanta		Kansas City		San Francisco	
	Percent		Percent		Percent		Percent		Percent		Percent		Percent		Percent		Percent	
Aware		84	---	90	---	82	---	41	---	66	---	42	---	55	---	75	---	69
Correct ounces and servings	1		2		1		3		7		2		1		3		1	
Correct ounces only	1		1/*		1		2		3		1		2		3		1	
Correct servings only	43		31		38		9		19		13		8		14		7	
Incorrect or don't know ounces and servings	39		57		42		27		37		26		44		55		60	
Not aware		15	---	9	---	17	---	58	---	33	---	57	---	44	---	25	---	30
Not ascertained		1	---	1	---	1	---	1	---	1	---	1	---	1	---	*	---	1
Number of cases	414		394		328		414		394		328		414		394		328	
	No. 1						No. 8Z						No. 5					
Aware		65	---	39	---	40	---	11	---	7	---	6	---	14	---	15	---	15
Correct ounces and servings	11		3		5		1		1		1		--		--		--	
Correct ounces only	7		1		2		3		1		*		--		--		--	
Correct servings only	26		11		15		--		1		1		--		--		--	
Incorrect or don't know ounces and servings	21		24		18		7		4		4		--		--		--	
Not aware		33	---	60	---	59	---	88	---	92	---	93	---	84	---	84	---	85
Not ascertained		2	---	1	---	1	---	1	---	1	---	1	---	2	---	1	---	*
Number of cases	414		394		328		414		394		328		414		394		328	

1/ Asterisk denotes less than 1 percent.

Table 40.--Features liked about cans used for food, by city

Features liked	Atlanta		Kansas City		San Francisco	
	Percent 1/		Percent 1/		Percent 1/	
Total	100		100		100	
Liked some features of cans	98		98		94	
Features liked:						
Storage	----	64	----	82	----	76
Can be stored indefinitely, not as perishable	37		36		36	
Convenient, easy to store	22		28		20	
Requires no refrigeration	11		19		26	
Can keep more, different foods on hand, buy in large quantities	4		18		18	
Leftovers can be stored in cans	3		3		2	
Can be stacked easily, nicely	2		2		3	
Take up less space, saves space	1		2		1	
Other storage features	1		--		--	
Convenience	----	21	----	28	----	24
Easy to open	11		13		7	
Convenient for emergency	3		6		11	
Easy to dispose of	3		4		2	
Convenient to take on trips, camping	3		2		4	
Convenient to use, handy (unspecified)	2		5		2	
Other convenience features	2		2		1	
Availability	----	17	----	14	----	14
Available in variety of sizes	16		11		10	
Available in variety of foods	2		3		3	
Available in all seasons	1		1		3	
General	----	43	----	27	----	23
Container unbreakable, doesn't leak	12		7		5	
More sanitary, cleaner	8		7		6	
Airtight, nothing can get in	6		3		1	
Just like them	4		1		5	
Like the lining in cans	3		3		1	
Can be reused for paints, flowerpots, etc.	2		2		1	
Clearly labeled as to contents, size, etc.	2		1		1	
Other general features	9		4		4	
Number of cases	352		349		276	

1/ Percentages add to more than their subtotals and these add to more than 100 because some respondents mentioned more than 1 feature.

Table 41.--Features disliked about cans used for food, by city

Features disliked	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Total	100	100	100
Disliked some feature of cans	20	28	28
Features disliked:			
Key type difficult, dangerous to open hard to get food out	17	14	11
Hard to open, dislike to open, dangerous	16	11	21
Contents get peculiar taste over time, flavor changes	10	5	24
Cans without rims hard to open (milk cans)	10	--	8
Difficult to dispose of container	9	33	14
No lining in cans, dark inside	6	5	5
Sardine cans hard to open	6	2	1
Shape or design of container	6	1	1
Limited choice in size	5	6	4
Can't leave food in them	5	5	3
Heavy to carry	4	5	4
Square cans are hard to open	4	1	3
Rusted, bent or damaged cans	2	7	2
Prefer glass-can see what you're getting	2	2	--
Would prefer screw tops	2	1	--
Specks of tin fall in food when can is opened	1	2	3
Label comes off and can't tell what is in can	1	2	1
Difficult to store	--	5	4
Ham/meat cans hard to open	--	2	2
Other features	4	12	7
Number of cases	82	110	92

1/ Percentages add to more than 100 because some respondents mentioned more than 1 feature.

Table 42.--Changes or improvements suggested for cans used for food, by city

Changes or improvements	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Total	100	100	100
Would like to see changes made	26	31	35
Changes or improvements suggested:			
More variety in container size	26	21	17
Easier, better way to open (unspecified)	13	9	13
Would like key-type opener on all cans; attach key to container	15	13	4
Prefer glass containers	9	8	5
Put a liner in all cans; treat cans to prevent discoloration	6	13	12
Eliminate key opener	5	6	9
Square cans for easier storage	4	5	4
Make milk cans and cans without rims easier to open	4	2	6
Improve quality of cans (unspecified)	4	2	1
Change shape for easier storage, opening, etc.	3	8	3
Make cans square for easy stacking	2	3	6
Stamp information on container instead of on paper label	2	3	3
Make cans rust-proof	2	3	--
Make cans of material other than tin	22	2	2
Make all cans square	2	1	4
Use replaceable covers, tops	2	1	2
Use screw tops	1	2	1
Make cans lighter in weight	1	--	4
Make cans easier to dispose of	--	2	2
Put spout on juice cans	--	2	--
Other changes or improvements	3	12	14
Number of cases	97	117	104

1/ Percentages add to more than 100 because some respondents made more than 1 suggestion.

Table 43.--Features liked about containers used for frozen food, by city

Features liked	Atlanta		Kansas City		San Francisco	
	Percent 1/		Percent 1/		Percent 1/	
Total	100		100		100	
Liked some feature of frozen food container	96		96		95	
Features liked:						
Convenience		67		69		73
Easy to open	47		37		51	
Easy to dispose of	21		41		40	
Easy to carry	5		4		10	
Convenient size	4		3		2	
Convenient to use, handy (general)	4		2		2	
Convenient shape	3		2		2/*	
Other convenience features	--		1		2	
Storage		40		52		35
Easy to store	23		25		20	
Takes up less space, saves space	9		11		5	
Can be stacked, easily, nicely	7		17		11	
Other storage features	3		3		2	
General		33		27		30
Just like them	6		2		9	
Attractive, neat package	4		5		4	
Sanitary, clean	4		4		3	
Compact container	3		4		3	
Can reuse package	3		1		--	
Available in variety of sizes, foods, all seasons	2		2		2	
Waxed paper on box	2		2		*	
Clearly labeled as to contents	2		1		1	
Instructions for use	*		1		3	
Other general features	7		5		5	
Number of cases	277		329		263	

1/ Percentages may add to more than their subtotals and these add to more than 100 because some respondents mentioned more than 1 feature.

2/ Asterisk denotes less than 1 percent.

Table 44.--Features disliked about containers used for frozen food, by city

Features disliked	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Total	100	100	100
Disliked some feature of frozen food containers	20	28	25
Features disliked:			
Containers flimsy, not well packed, juice runs out	23	13	17
Hard to open, dislike opening	19	23	8
Limited choice in size	16	29	35
Food sticks to container, to inside wrapper	16	8	16
Not airtight, not sealed properly, lets in germs	7	1	--
Round cans not easily stored, take up more space	6	3	--
Instructions or identification not conveniently located	4	6	4
Difficult to divide contents	4	1	1
Shape or design of container	4	--	3
Contents get peculiar taste over time; flavor changes	3	2	1
Require adequate refrigeration at all times	1	4	8
Can't be reused	1	--	3
Fruit containers are hard to open	--	15	9
Difficult, messy to dispose of container	--	3	--
Container sticks to freezer	--	2	1
Other features	11	7	10
Number of cases	69	104	75

1/ Percentages add to more than 100 because some respondents mentioned more than 1 feature.

Table 45.-- Changes or improvements suggested for containers used for frozen food, by city

Changes or improvements	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Total	100	100	100
Would like to see changes made	36	47	45
Changes or improvements suggested:			
More variety in container size	51	52	54
Improve quality of container (unspecified)	10	3	3
Make airtight, seal together; make leak proof	8	2	3
Easier, better way to open	7	10	7
Make container of different material plastic, tin	6	5	4
Package contents in separate units for partial use	6	3	6
Have inner lining of foil, wax paper, or plastic	5	5	2
Prevent food sticking to container	4	1	9
Use "zip tapes"	3	9	4
Make packages so can see contents	3	2	--
Use replaceable covers, tops	2	1	2
Change shape	2	--	2
Improve method of opening fruit packages	1	4	5
Pack fruit different - in cans	1	3	2
Place directions on box instead of wrapping	1	1	1
Other changes or improvements	7	9	12
Number of cases	108	155	127

1/ Percentages add to more than 100 because some respondents made more than 1 suggestion.

Table 46.--Label items referred to when buying a different brand or new form of a canned food product, by city

Label items	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
All homemakers	100	100	100
Refer to label	94	98	99
Item referred to:			
Brand name	56	46	66
Weight, quantity, can size	30	25	18
Price	20	22	20
Ingredients, type of syrup, etc.	17	28	17
Recipes and instructions for use	12	8	5
Form of contents (whole, halves, cream style, etc.)	8	11	7
Picture	8	10	6
Grade of contents, quality	7	12	7
Place packed	7	6	5
Number of servings	6	9	5
"Good Housekeeping" seal of approval	1	3	2/ *
Other label items	5	8	5
Not ascertained	5	1	5
Number of cases	385	370	316

1/ Percentages add to more than 100 because most respondents mentioned more than 1 label item.

2/ Asterisk denotes less than 1 percent.

Table 47.--Label items consulted during regular shopping for canned foods, by city

Label items	Canned vegetables			Canned fruits			Canned juices		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/
Brand name	82	93	89	82	93	89	80	91	83
Can size and weight	55	51	62	56	52	59	54	50	45
Number of servings	35	25	27	37	27	29	32	20	19
Recipes and instructions for use	29	26	30	28	22	27	23	17	17
Price	20	20	23	21	20	23	22	19	23
Form of contents (whole, halves, cream style, etc.)	2/ *	5	5	1	3	4	--	--	--
Type of syrup	--	--	--	--	6	15	--	--	--
Sugar content	*	--	*	*	1	4	*	5	6
Other items	7	9	8	6	6	6	5	3	5
Number of cases	395	386	309	401	380	307	357	323	271

1/ Percentages add to more than 100 because most respondents checked more than 1 label item.
2/ Asterisk denotes less than 1 percent.

Table 48.--Most important item on label when buying canned foods, by city

Most important label item	Canned vegetables			Canned fruits			Canned juices		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Brand name	60	77	67	59	76	69	60	77	70
Price	10	4	4	10	3	3	10	4	6
Weight, quantity, can size	3	3	4	3	2	3	3	3	3
Form of contents (whole, halves, cream style, etc.)	3	2	3	3	1	3	--	--	--
Grade of contents, quality	2	4	2	3	4	3	2	2	1
Ingredients, type of syrup, etc.	1	2	3	2	6	5	5	5	6
Other label items	8	3	7	8	4	6	7	3	4
Don't know and not ascertained	13	5	10	12	4	8	13	6	10
Number of cases	395	386	309	401	380	307	357	323	271

Table 49.--Frequency of label reference for recipes and ways of preparing canned foods at home, by city

Refer to label	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Always when using for the first time	11	6	5
Always	11	6	7
Very often, frequently, usually	11	9	5
Very seldom, hardly ever	22	35	30
Never, not at all	36	34	43
Occasionally, sometimes	3	2	1
Other	2	6	5
Not ascertained	4	2	4
Number of cases	414	394	328

Table 50.--Changes suggested for canned food labels, by city

Changes	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
Total	100	100	100
Suggest label changes	11	25	20
Changes suggested:			
Put recipes on labels, more recipes on label	15	23	19
State actual portion, servings	13	8	6
Make picture more accurate as to contents	13	7	13
Larger print	11	1	6
Put date packed on label	9	12	6
Put number of calories on label	9	5	14
List seasonings added, salt, sugar	9	2	6
Print "grade" on label	6	9	3
List all ingredients, preservatives	4	6	2
State number of cups in can	4	5	9
Make labels more attractive, brighter pictures, etc.	4	--	5
Larger print for weight and quality	2	5	13
Eliminate recipes	2	4	--
Show food value of contents	2	3	--
Show where contents are grown	2	1	3
Standardize labels -- all should show the same information in the same place	--	7	2
Show can number on all labels	--	3	--
Show weight in simple terms and more accurately	--	1	3
Other suggestions	13	11	8
Number of cases	47	99	64

1/ Percentages add to more than 100 because some respondents made more than 1 suggestion.

Table 51.--Acceptance of canned food label showing only Brand Name and contents, by city

Acceptance	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Would not accept ------	61	74	64
Would accept ----------	38	25	34
Not ascertained -------	1	1	2
Number of cases ----	414	394	328

Table 52.--Label items referred to when buying a different brand or new form of frozen food, by city

Label items	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
All homemakers ------------------	100	100	100
Refer to label ----------------	96	99	97
Item referred to:			
Brand name --------------------	53	39	55
Recipes and instructions for use	21	29	18
Price -------------------------	21	19	17
Weight, quantity, package size -	12	19	15
Number of servings ------------	12	17	8
Ingredients, type of syrup, etc.	7	17	7
Form of contents (whole, cut, etc.) -----------------------	7	7	9
Picture -----------------------	5	9	5
Place packed ------------------	5	5	2
Grade of contents, quality -----	2	7	3
Instructions for defrosting ----	2	2	3
All label items (general) ------	1	6	3
Other label items --------------	1	1	3
Not ascertained ----------------	10	4	10
Number of cases ---------	273	274	268

1/ Percentages add to more than 100 because most respondents mentioned more than 1 label item.

Table 53.--Label items consulted during regular shopping for frozen foods, by city

Label items	Frozen vegetables			Frozen fruits			Frozen juices		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/	Percent 1/
Brand name	78	87	80	74	74	60	78	84	81
Package size or weight	53	39	43	50	33	33	49	35	36
Number of servings	42	28	29	40	25	25	34	24	30
Recipes and instructions for use	30	32	46	24	23	31	22	23	33
Instructions on how to defrost	28	31	55	27	25	34	24	25	41
Price	22	15	16	22	12	12	23	14	14
Other items	3	7	3	4	8	4	3	7	1
Number of cases	272	266	273	255	259	173	258	251	213

1/ Percentages add to more than 100 because most respondents checked more than 1 label item.

Table 54.--Most important label item when buying frozen foods, by city

Most important label item	Frozen vegetables			Frozen fruits			Frozen juices		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Brand name	58	71	53	56	62	40	63	70	60
Price	10	5	5	11	4	4	10	4	6
Recipes and instructions for use	4	4	6	2	1	2	1	2	3
Number of servings	3	2	4	3	2	5	3	3	3
Weight, quantity, package size	3	--	2	3	1/*	2	3	2	2
Grade of contents, quality	2	2	2	2	*	2	1	*	1
Picture	1	3	2	1	4	2	1	2	1
Ingredients, type of syrup, etc.	1	1	2	2	1	1	2	2	1
Form of contents, (whole, cut, etc.)	1	1	3	1	1	1	--	*	--
Other label items	2	*	3	2	2	3	3	1	2
Don't know, not ascertained	15	11	18	17	23	38	13	14	21
Number of cases	272	266	273	255	259	173	258	251	213

1/ Asterisk denotes less than 1 percent.

Table 55.--Frequency of label reference for recipes and ways of preparing frozen foods at home, by city

Refer to label	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Always when using for the first time --	12	11	11
Always ----------------------------------	22	34	26
Very often, frequently, usually -------	7	10	9
Once a week to once a month -----------	3	3	1/*
Very seldom, hardly ever --------------	14	15	16
Never, not at all ----------------------	31	18	27
Occasionally, sometimes ---------------	3	3	4
Other -----------------------------------	1	*	1
Not ascertained ------------------------	7	6	6
Number of cases ------------	294	294	282

1/ Asterisk denotes less than 1 percent.

Table 56.--Usefulness and completeness of cooking instructions on frozen food packages, by city

Find cooking instructions -	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Very useful, very important ------------	53	62	62
Very useful, very important when trying product for first time -----------------	5	8	11
Very useful but instructions are not complete or specific ------------------	1	2	2
Fairly useful--some parts useful, some not ------------------------------------	4	2	2
Not useful at all, never use them ------	13	9	9
Not very useful, cooking time inaccurate	7	3	2
Not very useful--cook own way ----------	10	5	7
Don't use frozen foods requiring cooking	2	2	--
Other ------------------------------------	1	2	1
Not ascertained -------------------------	4	5	4
Number of cases --------------	294	295	282

Table 57.--Frequency of label reference for instructions on how to defrost frozen foods, by city

Refer to label	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Always when using for the first time	11	13	18
Always	33	41	37
Very often, frequently, usually	5	6	6
Once a week	1/ *	1	--
Very seldom, hardly ever	4	9	7
Never, not at all	30	18	17
Occasionally, sometimes	3	3	4
Other	*	1	1
Not ascertained	14	8	10
Number of cases	294	295	282

1/ Asterisk denotes less than 1 percent.

Table 58.--Satisfaction with frozen food labels, by city

Satisfaction	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Want nothing changed on label	87	84	85
Suggest label changes	13	16	15
Number of cases	294	295	282

Table 59.--Acceptance of frozen food label showing only Brand Name and contents, by city

Acceptance	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Would not accept -------	68	83	84
Would accept -----------	30	14	13
Not ascertained --------	2	3	3
Number of cases ----	294	295	282

Table 60.--Length of time canned food is stored before using, by city

Time stored	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Less than 1 week ---------	19	16	14
1 to 2 weeks -------------	24	20	21
2 to 3 weeks -------------	18	13	13
3 to 4 weeks -------------	6	7	6
1 to 3 months ------------	15	16	19
3 to 6 months ------------	2	4	3
6 months to 1 year -------	2	5	2
1 year or more -----------	1	1/ *	*
Indefinitely -------------	4	3	10
Not ascertained ----------	9	16	12
Number of cases ------	414	394	327
Median weeks ---------	2.1	2.5	2.7

1/ Asterisk denotes less than 1 percent.

Table 61.--Usual method of handling unused portions of canned food, by education and city

City and education	Left in can	Removed from can	Not ascertained	Cases
	Percent	Percent	Percent	Number
Atlanta ------------	5	95	--	414
Grammar school -----	3	97	--	156
High school --------	5	95	--	185
College ------------	11	89	--	65
Kansas City ---------	6	93	1	394
Grammar school -----	3	97	--	106
High school --------	5	94	1	207
College ------------	14	86	--	79
San Francisco -------	12	87	1	328
Grammar school -----	5	93	2	59
High school --------	9	90	1	187
College ------------	25	75	--	77

Table 62.--Opinions on safety of keeping canned foods in can after it has been opened, by education and city

City and education	Safe	Unsafe	Don't know	Cases
	Percent	Percent	Percent	Number
Atlanta ------------	18	74	8	414
Grammar school -----	5	88	7	156
High school --------	17	76	7	185
College ------------	48	38	14	65
Kansas City ---------	22	64	14	394
Grammar school -----	11	78	11	106
High school --------	20	67	13	207
College ------------	42	41	17	79
San Francisco -------	34	53	13	328
Grammar school -----	15	59	26	59
High school --------	38	52	10	187
College ------------	42	49	9	77

Table 63.--Reasons why it is considered unsafe to leave canned food in the can after it has been opened, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Fear of poisoning	60	54	26
Just heard it was unsafe	11	12	9
Fear of spoilage	8	10	24
Just afraid to leave it in can	7	6	3
Cans rust, corrode, discolor	5	9	10
Never did it; just know it's unsafe	2	2	12
Affects flavor, tastes tinny	2	2	5
Food discolors	2	1	2
Can't be covered properly	1	2	2
Other reasons	1	1/*	2
Not ascertained	1	2	5
Number of cases	307	254	173

1/ Asterisk denotes less than 1 percent.

Table 64.--Reasons why it is considered safe to leave canned food in can after it has been opened, by city

Reasons	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Just assume it's safe	33	27	19
Heard it said it is safe	21	26	20
Cans have been treated or processed	11	3	3
Can is properly made	8	1	6
Read that it is safe	6	18	21
Can has a lining	5	7	7
Can is sanitary	--	2	5
Other reasons	4	1	2
Not ascertained	12	15	17
Number of cases	73	85	113

Table 65.--Ways in which storing leftovers in can affects taste, by city

Replies	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Total	100	100	100
No opinion - never leave in can	14	10	7
Does not affect taste	41	42	45
Does affect taste	45	48	48
Affects taste	100	100	100
Food gets tinny, canned taste	45	59	57
Loses flavor, gets flat taste	12	6	7
Bitter, sour, acid, strong taste	8	11	8
Taste changes (unspecified)	7	3	2
Gets old taste, rancid, spoiled, tainted	6	7	7
Picks up odors from refrigerator	6	4	3
Gets peculiar taste	3	1	4
Other ways taste is affected	8	2	3
Not ascertained	5	7	9
Number of cases	186	189	157

Table 66.--Refrigerator storage space for frozen foods, by city

Ownership and freezer capacity	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
All frozen food users	100	100	100
Have no refrigerator	2	[1] *	1
Have no separate freezer space	19	44	31
Have separate freezer space	79	56	68
Freezer space capacity	100	100	100
Less than 10 pounds	15	4	11
10 to 19 pounds	17	4	15
20 to 29 pounds	7	7	6
30 to 39 pounds	10	5	13
40 to 49 pounds	11	11	10
50 to 69 pounds	12	15	17
70 to 99 pounds	13	24	13
100 or more pounds	5	3	3
Don't know space	10	27	12
Number of cases	231	165	191
Median capacity (pounds)	36	57	39

[1] Asterisk denotes less than 1 percent.

Table 67.--Difficulties or problems in storing frozen food, by city

Replies	Atlanta	Kansas City	San Francisco
	Percent 1/	Percent 1/	Percent 1/
All frozen food users --------	100	100	100
Have storage problems ------	15	22	23
Storage problems:			
Not enough space -----------	72	86	78
Difficult to defrost freezer with food in it -----------	5	6	9
Food doesn't stay frozen ---	--	6	9
Other problems -------------	12	3	5
Not ascertained ------------	14	2	--
Number of cases ------	43	65	65

1/ Percentages add to more than 100 because some respondents had more than 1 problem.

Table 68.--Length of time frozen food is stored before using, by city

Time stored	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Less than 1 week -------------	35	42	39
1 to 2 weeks -----------------	30	27	25
2 to 3 weeks -----------------	13	9	11
3 to 4 weeks -----------------	4	3	3
1 to 3 months ----------------	4	5	6
3 to 6 months ----------------	1	2	1
6 months to 1 year -----------	1	1	2
1 year or more ---------------	1/*	*	1
Indefinitely -----------------	3	1	3
Not ascertained --------------	9	10	9
Number of cases -------	294	295	282
Median weeks ----------	1.3	1.1	1.3

1/ Asterisk denotes less than 1 percent.

Table 69.--Ways in which refreezing thawed frozen food affects the taste, by city

Replies	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
All frozen food users	100	100	100
No opinion - never refreeze	12	8	11
Does not affect taste	64	56	62
Does affect taste	24	36	27
Affects taste	100	100	100
Gets stale taste, loses freshness, gets spoiled taste	23	19	28
Food becomes tasteless, flat	14	14	14
Food gets watery, soggy	9	17	7
Flavor is destroyed	9	15	10
Taste changes (unspecified)	6	1	3
Gets bitter taste, sour, acid, strong	3	4	3
Food gets dry, wilts	1	4	4
"They tell us not to do it, so it must affect taste"	8	--	--
Other ways taste is affected	9	4	6
Not ascertained	18	22	25
Number of cases	71	105	76

Table 70.--Reasons why it is unsafe to refreeze frozen food after it has been thawed, by city

Replies	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
All frozen food users	100	100	100
Don't know if safe	45	26	30
Feel it is safe	14	18	11
Feel it is unsafe	41	56	59
Why it is unsafe	100	100	100
Label tells you not to refreeze	55	59	62
Food will spoil, deteriorate	24	24	15
Fear of food poisoning	5	5	2
Taste is affected	3	1	1
Heard it was unsafe	1	4	5
Loses food value, vitamins	1	2	--
Texture is affected, gets soggy	--	--	4
Other ways it is unsafe	4	2	4
Not ascertained	7	3	7
Number of cases	121	164	168

Table 71.--Number of servings obtained from No. 2 size can for selected canned food products, by city

Number of servings	Peas			Green beans			Corn			Peaches			Pineapple		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
2 servings or less ---------	10	9	10	11	20	12	13	10	23	13	16	9	13	5	5
3 servings ----------------	12	11	26	12	18	26	13	14	21	10	11	17	8	8	14
4 servings ----------------	50	40	50	55	35	46	45	39	48	50	31	59	38	25	45
5 servings ----------------	12	16	10	7	11	6	17	16	4	11	13	3	15	15	9
6 servings ----------------	11	18	2	11	13	4	10	18	2	15	14	9	12	21	9
7 or more servings ---------	3	5	2	3	2	2	1	2	2	1	11	--	6	15	--
Don't know and not ascertained ------------------	2	1	--	1	1	4	1	1	--	--	4	3	8	11	18
Number of cases --------	147	126	50	102	125	50	132	122	48	115	55	34	87	73	22
Median servings --------	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4

Table 72.--Number of servings according to the label, for selected canned food products, by city

Number of servings	Peas			Green beans			Corn			Peaches			Pineapple		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
2 servings or less ----------	8	8	10	6	7	10	8	7	10	5	2	3	4	4	9
3 to 4 servings ------------	4	5	5	7	6	5	5	5	7	4	3	3	3	3	2
4 to 5 servings ------------	20	17	24	25	20	26	22	17	21	20	6	17	27	9	20
5 to 6 servings ------------	7	6	6	6	5	4	5	7	2	5	5	9	4	4	4
6 to 8 servings ------------	6	5	2	5	5	3	4	3	4	10	14	12	5	7	5
8 or more servings ----------	--	1	--	[1]*	1	--	--	1	--	1	4	1	3	5	3
Doesn't say on label --------	1	--	--	1	--	--	1	*	*	1	*	--	1	*	--
Don't know -----------------	51	57	47	48	55	45	51	58	48	50	63	47	49	62	46
Not ascertained ------------	3	1	6	2	1	7	4	2	8	4	3	8	4	6	11
Number of cases --------	353	352	218	247	315	196	323	358	254	377	351	271	342	328	271

[1] Asterisk denotes less than 1 percent.

Table 73.--Number of servings according to the label for canned tomato juice, by city

Number of servings	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
2 servings or less	5	2	9
3 to 4 servings	3	1	3
4 to 5 servings	17	3	5
5 to 6 servings	5	2	1
6 to 8 servings	7	2	3
8 to 10 servings	2	4	6
10 or more servings	2	2	2
Doesn't say on label	1	1/ *	*
Don't know	52	77	61
Not ascertained	6	7	10
Number of cases	269	252	193

1/ Asterisk denotes less than 1 percent.

Table 74.--Number of servings used at one time for selected canned food products, by city

Number of servings	Peas			Green beans			Corn			Peaches			Pineapple		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Less than 2 servings	5	7	15	4	7	13	5	8	12	5	9	17	6	9	14
2 servings	28	32	34	23	28	36	28	30	34	27	30	33	27	28	33
3 servings	18	21	17	20	23	18	18	21	17	17	20	16	15	18	14
4 servings	27	20	19	30	19	19	27	18	23	26	17	19	27	17	18
5 servings	10	8	6	9	9	6	9	9	5	8	10	5	7	9	5
6 servings	6	6	5	7	7	4	6	7	3	8	7	4	7	5	5
7 servings	2	3	--	2	4	--	2	4	--	2	3	--	1	2	--
8 or more servings	2	3	1	4	3	1	3	3	2	4	3	1	3	3	1/*
Don't know and not ascertained	2	--	3	1	--	3	2	*	4	3	1	5	7	9	11
Number of cases	353	352	218	247	315	196	323	358	254	377	351	271	342	328	271
Median servings	3	3	3	4	3	3	3	3	3	4	3	2	3	3	2

1/ Asterisk denotes less than 1 percent.

Table 75.--Number of servings of canned tomato juice used at one time, by city

Number of servings	Canned tomato juice		
	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Less than 2 servings	11	10	22
2 servings	23	34	31
3 servings	17	19	14
4 servings	23	15	16
5 servings	6	8	3
6 servings	8	5	3
7 servings	2	2	--
8 or more servings	2	4	1
Don't know and not ascertained	8	3	10
Number of cases	269	252	193
Median servings	3	3	2

Table 76.--Adequacy of servings obtained per can for one meal for selected canned food products, by city

Adequacy of servings for one meal	Peas			Green beans			Corn			Peaches			Pineapple		
	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco
	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent
Right number	61	53	64	60	52	67	65	58	65	56	43	49	57	47	63
Too many	26	40	26	26	33	23	22	30	22	32	50	40	28	42	22
Too few	10	7	6	13	15	5	12	11	9	10	6	7	9	4	5
Don't know, and not ascertained	3	1/*	4	1	*	5	1	1	4	2	1	4	6	7	10
Number of cases	353	352	218	247	315	196	323	358	254	377	351	271	342	328	271

1/ Asterisk denotes less than 1 percent.

Table 77.--Adequacy of servings obtained per can for one meal of canned tomato juice, by city

Adequacy of servings for one meal	Canned tomato juice		
	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Right number	51	28	50
Too many	34	65	39
Too few	9	4	1
Don't know and not ascertained	6	3	10
Number of cases	269	252	193

Table 78.--Size can used for selected canned vegetables, by city

Can size	Peas			Green beans			Corn		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Know can size	60	70	42	58	77	40	56	67	30
8Z or buffet	2	7	6	1	4	4	2	5	4
No. 1 (picnic)	5	1	2	4	1	2	4	2	1
No. 303	7	23	7	8	28	5	6	23	4
No. 2	42	36	23	41	40	25	41	34	19
No. 2½	4	3	4	4	4	4	3	3	2
Can size unknown	38	30	55	40	23	56	41	32	64
Small	8	14	17	5	5	14	9	10	20
Medium	6	1	17	6	3	19	6	2	21
Large	4	1	6	4	2	6	3	1	5
Regular, standard, average size	4	1	1	3	1	1	3	3	2
Other sizes	4	3	4	5	2	4	6	4	3
Don't know size	12	10	10	17	10	12	14	12	13
Not ascertained	2	1/*	3	2	*	4	3	1	6
Number of cases	353	352	218	247	315	196	323	358	254

1/ Asterisk denotes less than 1 percent.

Table 79.--Size can used for selected canned fruits, by city

Can size	Peaches			Pineapple		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent	Percent	Percent	Percent
Know can size	51	73	48	49	64	46
8Z	[1]*	1	3	--	--	--
No. 1 flat	--	--	--	13	14	25
No. 3	1	3	--	1	*	*
No. 303	7	5	2	3	7	1
No. 2	30	16	13	25	22	8
No. 2½	13	48	30	7	21	12
Can size unknown	46	26	50	48	32	50
Small	4	3	5	13	8	17
Medium	5	1	8	5	2	10
Large	15	8	27	8	2	10
Regular, standard, average size	2	*	2	2	1	1
Other sizes	3	3	1	3	5	4
Don't know size	17	11	7	17	14	8
Not ascertained	3	1	2	3	4	4
Number of cases	377	351	271	342	328	271

[1] Asterisk denotes less than 1 percent.

Table 80.--Can size used for tomato juice, by city

Can size	Canned tomato juice		
	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Know can size	28	61	31
No. 303 (300)	4	7	[1]*
No. 2	17	13	14
No. 2½	4	2	1
No. 211 cylinder	1	2	1
No. 3 cylinder	1	29	10
1 quart	1	8	5
Can size unknown	69	38	67
Small	10	4	10
Medium	8	1	17
Large	15	10	25
Other sizes	12	10	9
Don't know size	24	13	6
Not ascertained	3	1	2
Number of cases	269	252	193

[1] Asterisk denotes less than 1 percent.

Table 81.--Number of servings obtained from package for selected frozen food items, by city

Number of servings	Peas			Green beans			Lima beans			Peaches			Strawberries		
	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco
	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent
2 servings or less ----------	10	13	14	13	14	17	11	18	18	15	35	30	14	31	33
3 servings ------------------	13	18	24	20	21	24	17	13	28	15	23	30	18	24	25
4 servings ------------------	62	47	49	55	53	47	58	46	43	55	29	23	53	33	26
5 servings ------------------	6	9	4	5	6	5	6	12	5	7	5	--	5	3	1
6 or more servings ----------	6	12	7	4	6	5	5	10	5	2	5	2	5	6	5
Don't know and not ascertained	3	1	2	3	--	2	3	1	1	6	3	15	5	3	10
Number of cases ----------	157	204	233	127	119	192	222	142	151	123	96	53	228	226	135
Median servings ----------	4	4	4	4	4	4	4	4	4	4	3	3	4	3	3

Table 82.--Number of servings obtained from container of frozen orange juice concentrate, by city

Number of servings	Frozen orange juice		
	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
2 servings or less ------------	4	4	2
3 servings --------------------	9	9	7
4 servings --------------------	33	31	31
5 servings --------------------	8	9	9
6 servings --------------------	21	26	18
7 or 8 servings ---------------	10	12	10
9 or more servings ------------	6	7	7
Don't know and not ascertained -	9	2	16
Number of cases -----------	218	227	195
Median servings -----------	5	5	5

Table 83.--Number of servings according to label for selected frozen food products, by city

Number of servings	Peas			Green beans			Lima beans			Peaches			Strawberries		
	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco
	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent
2 servings or less ------	1	1	1	1	1	2	1/ *	2	--	1	2	4	2	4	2
3 to 4 servings ---------	5	4	11	8	10	15	7	5	11	6	3	11	6	4	10
4 to 5 servings---------	45	25	48	45	24	41	46	23	50	49	19	25	40	17	25
5 to 6 servings ---------	5	5	5	2	4	5	3	5	4	3	2	--	3	2	1
6 to 8 servings ----------	3	4	4	2	3	4	2	4	3	--	2	2	1	1	2
8 or more servings ------	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
Don't know --------------	39	58	28	40	55	30	38	60	30	36	67	49	45	65	51
Not ascertained ---------	2	3	3	2	3	3	4	1	2	5	5	9	3	6	9
Number of cases ---------	157	204	233	127	119	192	222	142	151	123	96	53	228	226	135

1/ Asterisk denotes less than 1 percent.

Table 84.--Number of servings according to the label for frozen orange juice concentrate, by city

Number of servings	Frozen orange juice		
	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
2 servings or less ----	--	1	--
3 to 4 servings -------	2	1	--
4 to 5 servings -------	26	6	11
5 to 6 servings -------	4	3	3
6 to 8 servings -------	12	6	10
8 or more servings ----	3	1	3
Volume $1\frac{1}{2}$ pints -------	4	14	1/ *
Volume 1 quart --------	4	3	20
Volume $1\frac{1}{2}$ quarts ------	2	2	1
Other volume ----------	1	1	2
Don't know ------------	39	56	43
Not ascertained -------	3	6	7
Number of cases ---	218	227	195

1/ Asterisk denotes less than 1 percent.

Table 85.--Number of servings used at one time for selected frozen food products, by city

Number of servings	Peas			Green beans			Lima beans			Peaches			Strawberries		
	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco	At-lanta	Kansas City	San Fran-cisco
	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent
Less than 2 servings	3	6	12	1	5	13	4	5	16	4	5	15	3	5	12
2 servings ---------	31	34	34	32	37	33	32	44	34	29	28	30	27	31	33
3 servings ---------	17	21	20	19	23	18	18	14	19	17	19	17	18	24	15
4 servings ---------	31	21	24	31	21	27	30	20	24	28	23	15	31	21	21
5 servings ---------	6	7	4	6	6	4	5	8	5	8	12	4	6	8	2
6 servings ---------	7	5	4	6	5	2	5	4	1	6	4	4	8	4	7
7 servings ---------	1	3	--	1	1	--	1/ *	3	--	--	3	--	1	3	--
8 or more servings -	1	3	--	3	1	--	3	1	--	3	1	--	2	2	1
Don't know and not ascertained -------	3	*	2	1	1	3	3	1	1	5	5	15	4	2	9
Number of cases-	157	204	233	127	119	192	222	142	151	123	96	53	228	226	135
Median servings-	3	3	3	3	3	3	3	3	3	3	3	2	4	3	3

1/ Asterisk denotes less than 1 percent.

Table 86.--Number of servings of frozen orange juice used at one time, by city

Number of servings	Frozen orange juice		
	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Less than 2 servings	4	5	13
2 servings	26	32	29
3 servings	19	23	17
4 servings	28	20	21
5 servings	6	8	6
6 servings	9	6	3
7 servings	--	3	1/ *
8 or more servings	2	1	1
Don't know and not ascertained	6	2	10
Number of cases	218	227	195
Median servings	3	3	3

1/ Asterisk denotes less than 1 percent.

Table 87.--Adequacy of servings obtained per package for one meal for selected frozen food products, by city

Adequacy of servings for one meal	Peas			Green beans			Lima beans			Peaches			Strawberries		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Right number	62	43	59	57	46	56	54	37	58	51	43	43	57	54	60
Too many	25	42	31	24	39	32	28	47	32	24	21	23	21	18	14
Too few	8	15	8	15	15	10	14	15	9	19	33	17	18	26	19
Don't know and not ascertained	5	--	2	4	--	2	4	1	1	6	3	17	4	2	7
Number of cases	157	204	233	127	119	192	222	142	151	123	96	53	228	226	135

Table 88.--Adequacy of servings obtained per container for one meal of frozen orange juice concentrate, by city

Adequacy of servings for one meal	Frozen orange juice		
	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent
Right number	44	36	48
Too many	45	53	41
Too few	7	9	4
Don't know and not ascertained	4	2	7
Number of cases	218	227	195

Table 89.--Size package used of selected frozen vegetables, by city

Package size	Peas			Green beans			Lima beans		
	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco	Atlanta	Kansas City	San Francisco
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Know package size	43	28	18	41	32	17	42	32	19
Less than 10 ounces	6	3	2	3	4	2	5	5	1
10 to 12 ounces	8	17	3	9	19	4	9	18	3
12 ounces	11	5	3	9	6	4	11	5	2
16 ounces	18	3	10	20	3	7	17	3	12
17 to 20 ounces	--	--	1/*	--	--	*	--	1	1
Package size unknown	53	69	73	54	65	76	54	64	75
Small	2	8	1	--	3	2	2	4	1
Medium	2	--	1	2	--	*	2	--	1
Large	1	--	--	2	--	--	1	--	--
Regular, standard, average size	17	3	30	16	3	32	17	2	31
Other sizes	1	3	2	2	1	1	2	2	3
Don't know size	30	55	39	32	58	41	30	56	39
Not ascertained	4	3	9	9	3	7	4	4	6
Number of cases	157	204	233	127	119	192	222	142	151

1/ Asterisk denotes less than 1 percent.

Table 90.--Size package used of selected frozen fruits, by city

Package size	Peaches						Strawberries					
	Atlanta		Kansas City		San Francisco		Atlanta		Kansas City		San Francisco	
	Percent		Percent		Percent		Percent		Percent		Percent	
Know package size	---	36	---	28	---	8	---	37	---	25	---	10
Less than 10 ounces -	7		8		2		6		6		3	
10 to 12 ounces -----	12		13		2		12		11		3	
12 ounces -----------	6		5		2		8		4		3	
16 ounces -----------	11		2		2		11		4		1	
Package size unknown ----	----	58	---	69	---	83	---	59	---	72	---	82
Small ---------------	3		5		4		5		14		3	
Medium --------------	1		--		--		2		1/*		1	
Large ---------------	2		2		--		3		3		2	
Regular, standard, average size -------	15		3		19		10		4		28	
Other sizes ---------	--		3		5		1		2		1	
Don't know size -----	37		56		55		38		49		47	
Not ascertained -------------	----	6	---	3	---	9	---	4	---	3	---	8
Number of cases ----	123		96		53		228		226		135	

1/ Asterisk denotes less than 1 percent.

Table 91.--Frozen orange juice concentrate container size used, by city

Container size	Frozen orange juice					
	Atlanta		Kansas City		San Francisco	
	Percent		Percent		Percent	
Know container size ----	-------	29	-----	31	-----	9
4 ounces ------------	2		1/ *		--	
6 ounces ------------	8		23		5	
8 ounces ------------	5		6		2	
10 ounces -----------	5		*		1	
12 ounces -----------	4		1		--	
16 ounces -----------	5		1		1	
Container size unknown -	-------	64	-----	64	-----	79
Small ---------------	17		16		48	
Medium --------------	1		*		*	
Large ---------------	10		3		11	
Other sizes ---------	9		2		4	
Don't know size -----	27		43		16	
Not ascertained -------	-------	7	-----	5	-----	12
Number of cases ----	218		227		195	

1/ Asterisk denotes less than 1 percent.

Table 92.--Usual and preferred way of purchasing meat in Cleveland

Type of service	Usually buy	Prefer to buy
	Percent	Percent
Butcher	55	66
Self-service (pre-packaged)	38	23
Both equally or no preference	5	9
Other (wholesaler)	1	1
Not ascertained	1	1
Number of cases	629	629

Table 93.--Reasons for preferring butcher over self-service in Cleveland

Reasons	Prefer butcher	
	Percent 1/	
Selection of meat		50
Can have meat cut to specification	21	
Can buy exact amount required	18	
Chance to select cut, grade, quality	17	
Larger selection, more variety	4	
Quality of meat		48
Fresher, not discolored	42	
Prime, choice, better quality meat	10	
Better flavor, taste	2	
Other quality reasons	3	
Inspection: Can inspect thoroughly, can see both sides		40
Confidence in butcher: Satisfaction with service, assistance in selection, pleasant personal relations		20
Economy		15
Less waste	8	
Less expensive	7	
Other general reasons		4
Number of cases	415	

1/ Percentages may add to more than the subtotals and these add to more than 100 because some respondents gave more than 1 reason.

Table 94.--Extent of satisfaction with service of butcher in Cleveland

Replies	Prefer butcher	
	Percent 1/	
Have no complaints		82
Have complaints		18
Have to wait, self-service is quicker	7	
More expensive; higher prices	5	
Limit on selection, have to take what he gives you	2	
Prefer to buy meat where buy groceries, means extra stop	1	
Occasionally dissatisfied with quality, meat not fresh, does not stay as fresh	1	
Health: Meat not as clean, exposed to germs	1	
Not ascertained	2	
Number of cases	415	

1/ Percentages add to more than the subtotal because some respondents had more than 1 complaint.

Table 95.--Reasons for preferring self-service over butcher in Cleveland

Reasons	Prefer self-service	
	Percent 1/	
Shopping convenience		75
Quick, easy, convenient, no waiting for butcher	48	
Opportunity to select meat	27	
Know price and weight	23	
More variety	2	
Inspection: Package permits inspection		20
Health: Package keeps meat clean, no germs, no handling		13
Quality of meat		13
Fresher, stays fresher	8	
Better quality, good quality	3	
Other quality reasons	3	
Economy		11
Cheaper, not as expensive	10	
Other economy reasons	1	
Preparation and storage		8
Ready to store; not necessary to wrap	6	
Ready to cook, pre-cut	2	
Store is nearby; buy everything in one store		7
Other general reasons		1
Number of cases	143	

1/ Percentages may add to more than the subtotals and these add to more than 100 because some respondents gave more than 1 reason.

Table 96.--Extent of satisfaction with self-service shopping for meat in Cleveland

Replies	Prefer self-service	
	Percent 1/	
Have no complaints		74
Have complaints		26
Inspection: Package conceals fat, bone or imperfections	14	
Meat not as fresh	6	
Limited selection: Have to take quantity, cut, quality already packaged	5	
Other complaints	3	
Not ascertained	1	
Number of cases	143	

1/ Percentages add to more than the subtotal because some respondents had more than 1 complaint.

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